

Entrez PubMed Nucleotide Protein Genome Structure PMC Taxonomy Book

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☐ 1: AL021711. Arabidopsis thali...[gi:5738363]

Links

LOCUS ATF13C5 119111 bp DNA linear PLN 10-MAR-2000  
 DEFINITION Arabidopsis thaliana DNA chromosome 4, BAC clone F13C5 (ESSA project).  
 ACCESSION AL021711  
 VERSION AL021711.2 GI:5738363  
 KEYWORDS .  
 SOURCE Arabidopsis thaliana (thale cress)  
 ORGANISM Arabidopsis thaliana  
 Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids; eurosids II; Brassicales; Brassicaceae; Arabidopsis.  
 REFERENCE 1 (bases 1 to 4778)  
 AUTHORS Bevan,M., Robben,J., Grymonprez,B., Volckaert,G., Bancroft,I., Mewes,H.W., Lemcke,K. and Mayer,K.F.X.  
 JOURNAL Unpublished  
 REFERENCE 2 (bases 4495 to 119111)  
 AUTHORS Bevan,M., Pohl,T., Weizenegger,T., Bancroft,I., Mewes,H.W., Lemcke,K. and Mayer,K.F.X.  
 JOURNAL Unpublished  
 REFERENCE 3 (bases 1 to 119111)  
 AUTHORS EU Arabidopsis sequencing,project.  
 TITLE Direct Submission  
 JOURNAL Submitted (09-MAR-2000) MIPS, at the Max-Planck-Institut fuer Biochemie, Am Klopferspitz 18a, D-82152 Martinsried, FRG, E-mail: lemcke@mips.biochem.mpg.de,mayer@mips.biochem.mpg.de Project Coordinator: Mike Bevan, Molecular Genetics Department, Cambridge Laboratory, John Innes Centre, Colney Lane, NR4 7UJ Norwich, UK, E-mail: michael.bevan@bbsrc.ac.uk  
 COMMENT On Aug 18, 1999 this sequence version replaced gi:2832611. Information on performance of analysis and a more detailed annotation of this entry and other sequences of chromosomes 3, 4 and 5 can be viewed at: <http://www.mips.biochem.mpg.de/proj/thal/>.  
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Contains ATP/GTP-binding site motif A (P-loop)
AA275-282;ATP/GTP-binding site motif A (P-loop) AA435-442"
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| 18121 | aatgtgtaag  | ctttgagaat  | ttttcttttt  | gtgtttttct | ttggtcacac  | aaccttttgc  |
| 18181 | tttataattg  | aaacttttag  | acacgtctgt  | ttcacgaaaa | ctgccattgg  | taatgggttt  |
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| 18421 | aaagactcaa  | atttttagctt | atgttgctgt  | ggatttagta | tttaccagaa  | aaagctatat  |
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| 18541 | atgagtgttt  | atttttgttt  | tggtatatac  | ttaaattagt | actatgttaa  | ctgtcttaat  |
| 18601 | tcttgtttag  | ctgggtcaatg | gtgagactga  | agaaatgatt | tccccttttg  | ccaacatcta  |
| 18661 | atgatgatgt  | ttggattttg  | cttggtgtgg  | gataaataaa | atggaattat  | tcattgtttg  |
| 18721 | accattagat  | gccaaagaaa  | atcattgttc  | ttttactttt | ttctttcctt  | agttgcatct  |
| 18781 | ggattttcaa  | tttttcaatc  | attgtgtcat  | cttggtcgtt | gtccaccagc  | ttttgcattt  |
| 18841 | cgtaaaaatg  | aaaaagaaaa  | aaaaaacaca  | tttttatgta | aataatctat  | gagggtattct |
| 18901 | cgatccattt  | agcaaagatt  | agttctttga  | gcactatata | ccaaataaaa  | tcattgtttt  |
| 18961 | ttctcacttt  | tttgcttagg  | tgcattttgg  | ttttcaacta | tcaatcatag  | tgctatcttg  |
| 19021 | ttcatgctct  | acagctctta  | catttcgtta  | aaaagaaaga | aaaaaaaaaa  | ttttatgctc  |
| 19081 | tttttgttgt  | tggtgataat  | ctattagaaa  | agattgttct | tttgagatct  | tctgatccat  |
| 19141 | ccattagcaa  | atgttggtct  | ttgaccatta  | taaaacgaaa | cagaatcatt  | gttctttact  |
| 19201 | tttttttttc  | ctttgtgcat  | ttggattttc  | tattatcaat | cataatgtct  | ttttgttgtt  |
| 19261 | tgctcaccag  | cttttgcatt  | atgtaattaa  | tccactagca | aaagattgag  | agagtctcag  |
| 19321 | ctccaaatgg  | attgtgttgg  | ttacattttg  | tgatatttct | tacacaattt  | gcaataaact  |
| 19381 | attgtgtagg  | gatgcaaacc  | aatggatcga  | atggacctca | tgaatggttc  | tacttcagct  |
| 19441 | agtccatgct  | catcgatatca | acatagccct  | cgtgcttctt | acaatccaag  | cccttcgtct  |
| 19501 | tcatcattcc  | cgagtcctac  | aaacccattt  | ggtgatgcta | actcactaat  | cccattgctc  |
| 19561 | aagaacctct  | cttcaaactc  | accttccaag  | cttcccttct | tccatggaaa  | ttcaataagc  |
| 19621 | gctcccgtga  | ctccgccatt  | ggctcgaagc  | cctactcgtg | atcaagtaac  | catccctgac  |
| 19681 | tctggatggc  | tctcaggaat  | gcaaactccg  | cagagcggac | cgtcttctcc  | tactttcagt  |
| 19741 | ttagtttcaa  | gaaacccgtt  | tttcgacaaa  | gaggctttta | aaatgggaga  | ttgtaattca  |
| 19801 | ccaatgtgga  | ctcctggaca  | aagtggaaac  | tgctctccag | ctattcctgc  | tggtgttgat  |
| 19861 | cagaactctg  | atgtgccaat  | ggctgatgga  | atgacggctg | agtttgctgt  | tggtgtaac   |
| 19921 | gcaatggctg  | cgaatggaat  | ggtgaagcct  | tggaaggag  | aaaggatata  | tggaatgt    |
| 19981 | gtttcagatg  | atttagaact  | tacatttggg  | aactcaagaa | ccagatgatc  | atttcagaga  |
| 20041 | agaatcaaa   | tcgttttgcta | tcatttaagtc | ttcttttttg | tctgtctttt  | ttttccagt   |
| 20101 | tgatgtttta  | aggtgactca  | gaggaaaaaa  | aggagaatag | aaagagaaac  | aaaaaaagaa  |
| 20161 | cattttgagc  | tctgttttct  | tttttttttt  | tctttttttt | ttgttggtct  | tttgactaaa  |
| 20221 | gttgtagtta  | gaatctattt  | tatatcttga  | agcttcttta | aaaaaaaaag  | tatttggtga  |
| 20281 | aattcgattt  | gagattagt   | atgttagtat  | aatgaatttt | atataaaaata | ttgaagccag  |
| 20341 | attggacttt  | agtaaccatt  | gtgaacgtga  | gaaaatatca | gtatctatcg  | ctgaaaattt  |
| 20401 | tatatttttc  | tatacattta  | aaagataaca  | gaaaagtggg | ttacgttgaa  | agaccaaaag  |
| 20461 | tatgtccaag  | aagtcatgct  | taacccaata  | gaaagtcaac | taacaatgag  | gaccacatgt  |
| 20521 | gatttgtctt  | gttaatttag  | gtacgtaaaa  | cgcgacacta | tgacaactcg  | tacgtaattt  |
| 20581 | cgcgaaataa  | atgaatagta  | acttcaactg  | gactatttta | caagtcaaca  | aattacttag  |
| 20641 | tgatcccaat  | ttaaatgtcc  | aattgttctt  | atttggttaa | aaatgaggcc  | catatatata  |
| 20701 | taattttttt  | atatgattta  | ttttttaatg  | aattttattt | agagtatgta  | aacagaacct  |
| 20761 | tcgctctctc  | tcgctaattt  | ggatagatac  | ctccgagcaa | gggttaagt   | taagcctcgt  |
| 20821 | ttgtatttgt  | aacgtaagtt  | gtcatcatcg  | taaagagtta | atcagggtta  | ttattttctt  |
| 20881 | tagtaaggaa  | tgtgttttac  | ccgattcttc  | tatcattatg | ttatctttgt  | tggtgaacct  |
| 20941 | ctcgattctc  | gaccttggat  | tttgaaaatt  | ggtataatta | ttatttgacc  | ctttttgttt  |
| 21001 | gtttatgttt  | tctttgtgtg  | tgtgtgtgtg  | tgtttatttg | gttattgtaa  | tctttgggaa  |
| 21061 | ttcttgtttt  | gagtgttttt  | ggaagatgtg  | tcgtgttaga | tggggatttc  | gttaggggtt  |
| 21121 | ctgtgagcta  | aaaaaggggt  | tatgtttctt  | tccctaattg | attttcgttt  | gtaaatattt  |
| 21181 | tttgagaat   | gataactaca  | ttttcttcta  | taccaaaagg | ggttgcaaag  | gccatgcgtg  |
| 21241 | ctgatgaact  | tccttctaag  | gaggaaatcg  | aaatgcacaa | agacagttgt  | aaatatctca  |
| 21301 | gtaatgatac  | agaagaagaa  | gagaccgagg  | atgaagaaga | gaatgggtga  | gttgctcatg  |
| 21361 | cgaaagccgt  | agcagaagag  | tttggaat    | catccaaaag | caagaatgtt  | tcttcttcaa  |
| 21421 | tgagagctga  | tgatgaggta  | gctgagggtt  | tgaaagaact | cgacatggat  | aattacgatg  |
| 21481 | aagaggatga  | tggttaagtta | ggttttaatt  | ctttgttctc | ctatagatgt  | gtagagaatc  |
| 21541 | tcaaaactca  | atttatgctt  | tcattgtgta  | caactaaatt | agactttcca  | ttgttgtgtt  |
| 21601 | tggaattcagg | aattgaaatt  | tttagctccg  | ggcgtgggga | tctttactat  | aagagtaacg  |

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|-------|-------------|-------------|-------------|------------|-------------|-------------|
| 21661 | agatggatcc  | atatctcaag  | agaaatgatg  | taagtcctta | tcaactaaact | ttttttttat  |
| 21721 | atacagagtt  | accggatttt  | ctatatagac  | acaataacat | ctatgttttt  | ctaggatcat  |
| 21781 | gatgatgact  | cggatgatga  | tccaccaatc  | ttaccaaccg | athtagtgat  | tgtctgcgct  |
| 21841 | atgactgacg  | acaaagaagc  | taaccgtctt  | gacgtttgtc | aattattttca | acatttttatt |
| 21901 | tattttatttt | actgcacata  | tatagatccg  | acattgaaac | ttatatgaat  | gcatgattag  |
| 21961 | gtttatgtat  | ccgaggacac  | atcccatggt  | tctccaaata | tgtataatca  | tcattacaga  |
| 22021 | attataaccag | caattccatt  | gtgtactgct  | tggcttgatt | gtccacttaa  | aggaggagaa  |
| 22081 | agagggttagt | gaaaatgtgt  | cactaaaagt  | cttatgaatt | aaaccaacta  | ggctctttca  |
| 22141 | ttcttgctat  | aaaaatgtta  | ctgaatatct  | ttgagtttct | tattggtagg  | gaatttccta  |
| 22201 | gctgttggtt  | cggatgggac  | gccacaata   | gagatatggg | atcttgatgc  | tgtatgtaa   |
| 22261 | actaaactgt  | ctttttgcat  | tttgtttctt  | tcataatcat | gaaatactat  | attttaattt  |
| 22321 | aaaattgatg  | atataatgct  | tcagtgggtc  | gacatgctac | cttgtgtaca  | actaggagga  |
| 22381 | caaaacaagg  | aaggggtgag  | tatttcattt  | ggtttaactg | caacagaaaa  | atgtactaaa  |
| 22441 | tgtaatcatt  | cttttgattt  | ctcgtcttgt  | cttagaacta | taaacaaggt  | agccacacta  |
| 22501 | gatacgttct  | tggctctgct  | tgggaataagg | agtttcggta | tgtccatgac  | tgaatctatt  |
| 22561 | tcttccgcga  | cttgctcttc  | tctatagacg  | tacgtgtctg | agtttatgtt  | tctttttttt  |
| 22621 | ccggacaaaa  | aaggaatata  | cttgctagtg  | ctagtgccga | caaaaaagtt  | aaggtatggg  |
| 22681 | atgtggctac  | tggaacgtgt  | aagattacta  | tggagcatca | cacaaaggag  | gtaagaacaa  |
| 22741 | gattcgtaga  | actagaaatt  | tcttagatta  | taggattctc | atggattttt  | gtttgtatga  |
| 22801 | tccacagggt  | caagcgggtg  | cttggaacca  | ttatgctcca | gaagtgtctc  | tcagtgggtc  |
| 22861 | ctttgatcaa  | actgttgtat  | tggtaaattg  | tttgttccat | ggtttatttc  | atgtattcca  |
| 22921 | gtcttttggt  | ttacacaagg  | atcattaata  | taggtttgta | tattgttgta  | gaaagacgga  |
| 22981 | agacaacctt  | cacactcggg  | tttcaaatgg  | tctgtcatgt | ccgatgttga  | aagcttagcc  |
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| 23161 | gtggccttgc  | ttatatatag  | gtaagtctcg  | aagatggaac | tgtcaagggc  | tttgatgtac  |
| 23221 | gtcaagcctc  | catttcagcc  | tctgaatcaa  | atccaagctt | cactattaat  | ggacatgacg  |
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| 23401 | aacatatttc  | ttattcccct  | ttgtctactc  | tctcttggtg | cattgttctt  | tgttatgtat  |
| 23461 | gttttactag  | ttctcaccat  | tttgtagctg  | taattgaaca | gcttttgcca  | acgggatcta  |
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| 23581 | acaatccaaa  | tgtgtgaaga  | accaataatc  | gaccatttaa | aaaaaataaa  | attgggttcg  |
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| 23701 | cagggaggct  | tattcttcat  | tgcctttctt  | cgggacaatc | ctttcttact  | cgtcatgggt  |
| 23761 | ggcgtaatgg  | gggagttaaa  | actttgggat  | acactttcgg | acactaatgt  | ctccagcaga  |
| 23821 | tacggaagca  | gagaagtccg  | accgtgaaaa  | gtccaagcta | aactttgatt  | ggtcgtcaca  |
| 23881 | ttcgaacaca  | acttaaccac  | aattttgttt  | agtttctttc | tttcattaat  | gttcgtttta  |
| 23941 | tttcttggtg  | aatggctata  | attattattt  | ctggctcaat | gtttaatcag  | accatacga   |
| 24001 | aatagcccat  | tagtttatca  | gaagtagctc  | agaatatttt | agttaattaa  | tggttatttt  |
| 24061 | acaaacatat  | gtgggttagga | tagaccaa    | tagtcatggc | ttattggtaa  | accataaggg  |
| 24121 | tttaagatat  | gtaaatggtc  | actaaaattt  | agttttaaag | taaggtatca  | cttctgcaat  |
| 24181 | ttattaagaa  | ttttatcttt  | aattaatatt  | tttagtgaaa | tttttagtgg  | aattgccttt  |
| 24241 | gttcgagtga  | ttgaccaa    | gtttattaat  | acttctacat | ctaagtctac  | gattcgagtt  |
| 24301 | ccaaaaaaaa  | cgcagtctct  | tgcagatgaa  | tgatgcaa   | cttattggag  | atccatagtg  |
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| 24421 | aatatcgat   | atgcagaatc  | gtccgctgaa  | gatcagaatg | ttgtgaggag  | agagctgcat  |
| 24481 | cttggaatcg  | ttgttcgtgg  | aaactgttca  | tcataaataa | aatataaaat  | taacagtttc  |
| 24541 | aactttcaaa  | aggttttcta  | tgtacatttt  | tgaagttaaa | ggtctttaat  | tcaataacta  |
| 24601 | aatagttttg  | ggcttttaag  | aaattttccc  | ttaaagttgt | tcttctctct  | cttcgctcag  |
| 24661 | gcgcgtata   | ctcactctcg  | gcaaaaaaaaa | agttcctcag | aagcaaacaa  | atcttcaatt  |
| 24721 | gttaaaccct  | aaacctacaa  | agtccttgac  | tttgtttggt | gctcatcttc  | gttcttctct  |
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| 24841 | tacttttcaa  | tgatcatagc  | tttaaccacg  | ctttgaaatt | cttgatgtg   | gtttatcaaa  |
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| 24961 | taccgatttg  | atgattctct  | ctctgttttg  | aatatttgca | gaatgataac  | tgcagtgtca  |
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| 62461 | ttgttaaagt  | tactcctcaa  | ggcatgtctt  | tctcgctaata | aattgtcttt  | ccatcaatca  |
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| 62581 | ccacaagata  | caattaaaaat | ggcattaaca  | acaaatcata  | ttttcttgga  | atcaaaacat  |
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| 62761 | gtcattttct  | ttcttttagtt | attgtttgta  | tatctcgctc  | gatcttacat  | tactttgttt  |
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| 63061 | gccacgtaat  | cgcgcgaagg  | agaacgacgg  | cagttataga  | ttaaacaaac  | acgtggcacc  |
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| 72241 | aatgagtggt  | atcaaaaaca  | taaagagtta  | atatatccat  | ttggttcgta  | agatttttcc  |
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| 73861 | atgtgagatt  | tatgagtttt  | tcacacgtct  | aataacaaaa  | gttgaccat   | ttgttatgca  |
| 73921 | aataggctta  | agccttaaag  | gcaacactaa  | cgatgaaact  | caacttaata  | ggatagattc  |
| 73981 | atgtgtctgt  | ggagaacaaa  | gttcaaaaag  | ataactgtaa  | tacctaaaaa  | cttaaaagga  |
| 74041 | agttgcattt  | aatcctcaga  | gaatgttaca  | atctgtagct  | taaacgaaca  | gtgaaggaaa  |
| 74101 | aaagaggaaa  | gaagagttta  | agctgcaaca  | agatcagggtg | tctcggcctc  | aacagataac  |
| 74161 | aatgtgggtg  | gaaccttate  | gacctagctg  | tctagctgat  | ccctcaatga  | cttgatctgc  |
| 74221 | ggtattccta  | acacctcgg   | ttgcgccc    | gagacgtaaa  | ctgttccatt  | cacctgatct  |
| 74281 | agtattccct  | ctatcaagtg  | cacctgcaat  | aactcattct  | cctcagtttt  | cacaatcaac  |
| 74341 | caatacagaa  | tcacacattc  | aagaagattt  | cgagtctgcg  | tcttgccaat  | cttctttaga  |
| 74401 | tttttaattg  | tactgataga  | atgagataga  | gagaaagaga  | gaggaaagaa  | aaagggtactc |
| 74461 | accgataagc  | tcttcattgag | aagggtctca  | acatcttcga  | ttgaaagttt  | agtacgtctg  |
| 74521 | gcaattgacac | tcaaaggtat  | ggtcctatct  | tcagcaggtc  | ggctgtggca  | aagatgttat  |
| 74581 | atacaagtta  | agtactaagt  | ttgttttcat  | ctgtatatgg  | gtataagatg  | actcctacag  |
| 74641 | agaatgaata  | cctgaaaatg  | atctcaataa  | ggcagagaat  | gttgatcttc  | tctaattggt  |
| 74701 | tcttctcatt  | ctcaaccagt  | gctggttgag  | cactcaacga  | tgcattgtgc  | acacgacaga  |
| 74761 | gttcttggtg  | ctgaactaaa  | tctccgtggt  | tgaatgcttg  | tagaatgtgg  | taaagccatt  |
| 74821 | ccacatttgt  | tccaagcaga  | cttttcaact  | gccataacat  | atataacatg  | tcagtgttct  |
| 74881 | tttatctata  | atggtgaata  | aatctgtggt  | ttgctaattt  | ggaggatgaa  | gggaaactta  |
| 74941 | caattggatg  | ggctaacagt  | tccccaaagt  | tatagatatt  | ctccccaaagt | agagctgaaa  |
| 75001 | gcgacaaatc  | aaaagccaaa  | tctgaaaga   | aacgaaagta  | tatgatatta  | acattttgat  |
| 75061 | tggaacacaa  | agcaattttac | agagataaag  | cattttttcac | tgtaagtttc  | ctttcataga  |
| 75121 | gtgctaatac  | ttatccaaaa  | ttgctaaaag  | accatttggt  | aacgtaacga  | ctacatatat  |
| 75181 | catatatgaa  | tgattagaac  | attcagaggg  | acgtaccagc  | ttaaattgatt | ccgagagtga  |
| 75241 | gtccacagac  | gtataagcga  | ggtaaagaag  | agcattttta  | tagaactcag  | agaactcttg  |
| 75301 | acggacttta  | tggtactgag  | aagagaccca  | aaagaagttg  | gcataaactg  | atggatcaat  |
| 75361 | gtcagtcata  | ctatcaagca  | ggctttttcc  | atcgtccaag  | attttcttgc  | actccttctg  |
| 75421 | gtcaccttgc  | tcaagcttga  | acaaagctat  | ttgtgtttct  | atatagctaa  | ttggttcatt  |
| 75481 | tatccttgac  | tcttttagtag | ctttaagctt  | ctcaatcact  | ccttcaagat  | aactaactgc  |
| 75541 | agcttctttc  | tcaggatact  | gtcgggagac  | tacaacagcg  | aatgcgcaa   | gcttcagaag  |
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| 79321 | agaagaggct  | caagctccat  | tggatctcca  | ttcttcttct  | agatctgaac  | cggaatgtct |
| 79381 | ctctcttgtc  | ctctggtgtc  | ccaatcctga  | agaagctgct  | ccgtcctcta  | ctagagaact |
| 79441 | cataaagctc  | cccgacaacg  | gagagatgag  | tttgaggaga  | tccacgacgc  | ttaattgtaa |
| 79501 | ttcgccctgaa | gagaacggag  | gagaagggag  | agtttcgcag  | aggaagtcac  | ctcgtggtaa |
| 79561 | gtcacagccg  | ctgcttatgt  | tgacgaacgg  | ttgtcagctt  | cggaggctgc  | cgagatttag |
| 79621 | ggccctgcat  | gcaaatttctg | acaatgtatg  | ctcggttccg  | gttaccaaaag | ggggagtttc |
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| 79861 | tactcgccaa  | tttttttgtt  | tgttcttgtt  | agtagccacg  | caatgcaatg  | cagcttagtt |
| 79921 | agagattgga  | aagtataatc  | gtcgttcttt  | tttttgggtt  | gatgcagaag  | gaaagctcag |
| 79981 | attctgaggg  | actgacattc  | aagtaagtaa  | aaaagcttca  | cagcatttgt  | tattgtattt |
| 80041 | tttgcttggg  | aaatcatcct  | tgaaatgggg  | attttagttc  | tcaaatactg  | ttttatgtta |
| 80101 | aaattgatgc  | agagatatag  | ctgtaattgc  | caagagcctg  | gagatggaaa  | taatttccga |
| 80161 | gtgccaatat  | aagaacaacg  | ttgctgaagg  | tagatcaaga  | ttgcaagatc  | cagccaagag |
| 80221 | gaaagttgat  | agtgatacat  | tattatattc  | aagcatcaat  | agttctaaac  | agagtctcgg |
| 80281 | aagcaataaa  | cgaatgagga  | gatctcaaag  | attcatgaag  | ggaacggaga  | atgagggaga |
| 80341 | agaaaatcta  | ggcaagtcta  | aagggaaaag  | gatgtctctg  | gcattcttgc  | catttcgaag |
| 80401 | atctacaagg  | ctatctggaa  | ctgtggaaac  | tggcaacaca  | gaaactttga  | acagaagaaa |
| 80461 | agattgtggc  | ccggcattat  | gtggtgcaga  | acaggtgagg  | ggaactgaga  | ggctggtgca |
| 80521 | aattagtaag  | aaggatcact  | gttgtgaggc  | tatgaagaaa  | tgtgaagggt  | atggcctagt |
| 80581 | ttcatccaag  | caagagctat  | tagtttttcc  | ttcgggttgc  | atcaagaaaa  | ctgtaaattg |
| 80641 | ttgtagggac  | agaacgttag  | gaaaaccag   | atcttctggc  | ctaaatacgg  | atgatattca |
| 80701 | cactagctct  | ttgaaaatta  | gcaaaaatga  | tactagtaat  | ggattaacta  | tgacgactgc |
| 80761 | gttagtgagg  | caagatgcaa  | tggagtcttt  | acttcagggt  | aaaactagtg  | cttgtggtgc |
| 80821 | tgctgataag  | ggaaaaactc  | gggaaatgca  | tgtaaatctt  | actgtgatct  | atctctctga |
| 80881 | cagcgatgaa  | ccgtcttcta  | ttgaatattt  | aaatggagat  | aatttgacac  | aagtcgaaag |
| 80941 | tggactctgc  | ctctcctctg  | ggggtaatga  | gggaatcggt  | tcactggatc  | tgaataatcc |
| 81001 | aacgaaatca  | accaagagaa  | agggtaaacg  | ggtaaccggg  | actgctgtcc  | aagagcagaa |
| 81061 | caaacgtagt  | atctgttttt  | tcattgtgga  | gccactttct  | tgcgaggagg  | ctcaagaaag |
| 81121 | atggcgctgg  | agatatgaac  | ttaaggtagt  | tgattaattt  | ctttgcactt  | gactgcttta |
| 81181 | gcttaaaaaa  | ttgttaagtt  | agtttgagca  | gtagagattg  | catagtctta  | agtatatatt |
| 81241 | tgtaatccaa  | cataaaagga  | cctcatatct  | ttcttttcac  | tctcaaaata  | tccgcttcat |
| 81301 | ttctgattat  | gaatttctact | aatttttcagg | aacgcaaate  | taagagttaga | ggccaacaat |
| 81361 | cagagtaagt  | actggttctt  | tgtcaactca  | ctgttttttt  | tctacaatat  | tctcttcctt |
| 81421 | catatgtggt  | ttgttttact  | gtatatccaa  | tatcctgagc  | aatgtttttg  | aagggatgac |
| 81481 | gaagacaaga  | ttgttgcaaa  | tgtagaatgc  | cattattcgc  | aagcaaaagt  | cgacggtcac |
| 81541 | accttttagcc | ttggagactt  | tgcctacata  | aaggtaaacc  | atgcttatca  | tgaatatggt |
| 81601 | attttttagc  | tcagtatccc  | tgcgctgctt  | ttcacttttt  | cattggacca  | aacaactttt |
| 81661 | tcattcaaga  | gccttggtat  | ttctagaatg  | taatgcgttt  | gtgagaagaa  | catatatagc |
| 81721 | taattacatg  | ttcatctcca  | atatggtaca  | gggtgaagaa  | gaagaaaccc  | atgttggcca |
| 81781 | gatagtagag  | ttttttaaga  | caacagatgg  | agaaagctac  | ttccgagttc  | agtgttttta |
| 81841 | cagagcaacg  | gatacagtg   | gtatacaagt  | tcttctcttt  | tgtttgctta  | attgtttgcg |
| 81901 | ctgcaacaac  | tagttactca  | tttgtcta    | gtttgtagat  | aatggaacgg  | caggctacta |
| 81961 | atcatgacaa  | aaggcgtctc  | ttctattcta  | ccgtaatgaa  | tgacaatcca  | gtagattgtc |
| 82021 | ttatttctaa  | agttactggt  | ttacaagttt  | cacctagggt  | atgctgagtc  | aagctcatc  |
| 82081 | tttttctctc  | tctctctctc  | tctctctttt  | ttttggttac  | aatctcaaca  | cagttgatca |
| 82141 | gtttgtttaca | atctgcattt  | taagtgattt  | tgtttcatga  | ctttgcaggt  | cggattgaag |
| 82201 | cccaattcta  | taaaatctga  | ctactatttt  | gatatggagt  | attgtgtgga  | gtattcaaca |
| 82261 | tttcaaacct  | tgagaaatcg  | taagtgtctc  | tgtaatatgt  | ttatgagtta  | ttaattggaa |
| 82321 | acggatatag  | ctgttttctc  | tttatttctt  | ttaaagcaaaa | cagatgccac  | agtttatgag |
| 82381 | cagtttgaca  | cagtctttat  | ataagatcct  | aggtacagaa  | gcttgagcat  | tcttttttct |
| 82441 | tctttttttg  | gtctcagcta  | aaacgtccga  | aaacaagctt  | gagtggtgtg  | ccgatgtggt |
| 82501 | acctacagaa  | tccactgaat  | ctattttgaa  | aaagaaaagt  | tttagcggag  | agcttcctgt |
| 82561 | gcttgatctt  | tacagtgggt  | gtggtggaat  | gtcaactggg  | ttaagtcctt  | gagccaaaat |
| 82621 | atctggtgtt  | gatgtcgtga  | cggtaactgc  | tttaagtaat  | taatctttat  | ctctttaact |
| 82681 | taggatggaa  | agctctttct  | tcactcactt  | tcatttaata  | tctggattcg  | tttttatttt |
| 82741 | tctctttcag  | aaatgggctg  | tggaccagaa  | tacggctgcc  | tgtaagagct  | tgaattgaa  |
| 82801 | ccatccaaac  | acgcaggtca  | gaatactttc  | ggcgacaact  | gctagatcat  | ttttggagaa |

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|-------|------------|-------------|-------------|-------------|-------------|-------------|
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| 82921 | ttcctccaac | ttttgaagga  | atgggataaa  | ttatgcaagc  | gatatgtgtt  | taataatgat  |
| 82981 | cagagaactg | atacattaag  | atccgtaaat  | tcaactaaag  | aaactagtgg  | aagcagctct  |
| 83041 | tctagtgatg | atgattcaga  | ttctgaggag  | tacgaagtgg  | aaaagctagt  | tgatatatgc  |
| 83101 | tttgggtatc | atgacaagac  | aggaaaaaat  | ggcctgaagt  | ttaaggatatg | ccctgttgcc  |
| 83161 | cttatattgt | tgatctaacc  | ttacttctta  | gggttttaag  | agtgttcttt  | tcagctttta  |
| 83221 | taacttccaa | gacataattt  | tgtaattctt  | tgctagcttt  | atgacgtttt  | agttttctga  |
| 83281 | agacgaatta | tgcccatgac  | tttttcatta  | ggtgcactgg  | aaaggataca  | gaagcgacga  |
| 83341 | agatacatgg | gaactagcag  | aggaattgag  | gtatatgctt  | caaaacaatg  | ttaaaaagag  |
| 83401 | attctgttgt | tatctggaac  | taattaattt  | tgtttggaat  | tttagtaact  | gtcaagatgc  |
| 83461 | cattcgggag | tttgtaacta  | gtggatttaa  | gtccaagatc  | ttgccacttc  | ctgtaagaac  |
| 83521 | ttgcttctga | attgaattct  | tgatctttga  | aagtcgtatg  | attgtaccat  | caacatctat  |
| 83581 | ttgccatgaa | catttatatt  | cactgaaaat  | aaaaaaatct  | tgtcaatgat  | tgtaactagg  |
| 83641 | gtcgtgttgg | tgtgatattg  | gggggacctc  | catgccaaag  | aattagtggc  | tataaccggc  |
| 83701 | acaggaatgt | tgattctcca  | ttgaatgatg  | aaaggaatca  | gcaaattata  | gtttttatgg  |
| 83761 | acatagtggg | gtatctgaaa  | ccctcatatg  | tgttgatgga  | aaatgttgtt  | gatattctgc  |
| 83821 | gtatggacaa | aggttctctt  | gggcgatacg  | ctttgagccg  | tcttgtgaac  | atgagatacc  |
| 83881 | aagcaagggt | aggatatcat  | acagctgggt  | gctatgggtc  | ttcccaattt  | cgatccagag  |
| 83941 | ttttcatgtg | gggagctggt  | ccaaacaagg  | tgaatttata  | ggcctattaa  | cttcctcgag  |
| 84001 | gtgacggttt | catacttaca  | ttatttggtt  | tttcatttca  | gaacctacct  | ccgtttccgc  |
| 84061 | ttccaacgca | tgatgtttat  | gtcagatatg  | ggcttccact  | tgagttcgag  | gtaatcaaatt |
| 84121 | tgtaaattgg | gacttatctt  | atactctttt  | cattaagcct  | gtcgttcttc  | caacttaagc  |
| 84181 | cacottggct | ttcatgtttc  | agaggaatgt  | agttgcttat  | gctgaaggcc  | aaccagaaa   |
| 84241 | acttgaaaaa | gctcttggtc  | taaaagatgc  | gatatcagat  | cttccctcat  | tatgtttcat  |
| 84301 | ttccactaga | tccatctgca  | attcagggtt  | aatatatatt  | tataatttct  | tttcacatat  |
| 84361 | ctaggtatca | aacgatgaag  | accgggagaa  | attgccttat  | gaaagtctcc  | caaaaacaga  |
| 84421 | ttttcagagg | tacattagat  | caaccaaacg  | tggttaagttg | gatctggatt  | ctgtagttac  |
| 84481 | ggtctctttc | acaacaattg  | tctgataagc  | catgaccact  | tgcatattac  | atatggtagc  |
| 84541 | tcacgcgtta | gtgttttgct  | atgtcagatt  | tgacaggctc  | tgcaattgat  | aactgtaaca  |
| 84601 | aaagaacaat | gctactgcat  | gatcacaggc  | cgttccatat  | aaatgaagac  | gactatgcc   |
| 84661 | gagtttgcca | aatccccaag  | aggaaggtag  | tcatttcgtt  | ttactaatta  | acaatcccga  |
| 84721 | tcctctagcc | gaaagattct  | catgtcgaga  | gaagtgtttg  | cagggagcta  | atttcagggg  |
| 84781 | tcttccgggg | ttaatcgtca  | gaaacaatac  | agtatgtcgt  | gatccatcaa  | tggaaccggt  |
| 84841 | tattctgcca | tcaggaaagc  | ctttggtaaa  | gaatcctctt  | atatgaactg  | agccatacca  |
| 84901 | aaattacatg | agttatcgat  | gaaactacac  | attagtgtctg | aaattctcaa  | gctaattgtca |
| 84961 | ttctgcttgt | taagtctgct  | gtcaacaggt  | ctcataatcc  | caaaaattaa  | tatatgtgta  |
| 85021 | ctgaatcagc | tcacttggtg  | ccctccttag  | gtaccaggat  | acgtctttac  | ttttcagcaa  |
| 85081 | gggaaatcta | aaaggatatac | tcttacactc  | ctccgcctga  | aactatttgt  | tgaagctttc  |
| 85141 | atgtttttta | gtctctctgg  | atttataaaa  | ttcgagacc   | gtttgctcgt  | ctttgggtgg  |
| 85201 | atgaaactgt | tccaaccgtt  | ctaacagtc   | caacatgcca  | cagtcaggta  | ccctcaaagc  |
| 85261 | cattccaggt | tttaacataa  | taccatattt  | taaattctta  | aaagtttcta  | taagaagttt  |
| 85321 | gctatttgca | ggcgttattg  | catcctgagc  | aagatcgagt  | gctaaccata  | agagaatctg  |
| 85381 | cacggcttca | aggtttcctc  | gattacttcc  | agttctgtgg  | aaccattaaa  | gaaagggtact |
| 85441 | tgtttttgtt | catttggaag  | aaattataag  | aaccaggaca  | atagtttcag  | actactaagc  |
| 85501 | aaatgcgaat | atcatttcac  | ttcttctcac  | tatctacagg  | tattgtcaga  | ttggaaatgc  |
| 85561 | agtggcagtc | tcggtttctc  | gtgcttttag  | ttattcgctt  | ggtatggctt  | ttcgtgggtc  |
| 85621 | agcccgcgac | gagcatctta  | taaaacttcc  | ccaaaacttt  | tcgcattcaa  | cttaccctca  |
| 85681 | gcttcaagaa | accattcctc  | attgaagcag  | aggacattaa  | acaagtttgt  | tattagtctc  |
| 85741 | tctccatgag | gcttcgtcaa  | aatgatcaat  | tttgttcttt  | agtttttctt  | tgtgttagtg  |
| 85801 | aattgtgaca | tcatagcggc  | tggccagctc  | agtctactat  | gctcgatcga  | aatttcgggt  |
| 85861 | tgattaggat | ttttcgatta  | gtaaattctt  | caaaaattaa  | tcttatttta  | gccaaactaa  |
| 85921 | atgtaattta | ttctttgttg  | ggtaattaga  | tgaataataa  | ttgggtcttt  | ttctcacatt  |
| 85981 | ttagtggatg | aaaagtttcc  | tcattgtttt  | cttctttatt  | catcacaaat  | gaaaagtttc  |
| 86041 | ctgatgttgc | atgagaaaaa  | tatgaggtga  | atgatttggg  | atgtgtgcca  | ttcgttagag  |
| 86101 | attgggtatg | ggtggatgat  | gttttagttt  | gatctatcag  | gtcaaaccac  | cacgtgccgt  |
| 86161 | gcccggcttt | taagttctat  | ggacaaaagt  | attgccccac  | taggcaaatg  | attgtgactc  |
| 86221 | cggtcttgtt | gctttccttt  | gacaaaattc  | aaattctaca  | tattcaacaa  | ttttgcttaa  |
| 86281 | aactttaaag | tttgatcttt  | ctagaattga  | atttttattat | ttaaaaataa  | tacgatacag  |
| 86341 | ttacacatta | ataacaagat  | agagaatctt  | ggcgtaaca   | ataaaagaga  | taaacgtagc  |
| 86401 | aattaataca | aaggccatat  | acgtaagggtg | tggtgaaagt  | tggttacattc | atgtgaaat   |



|       |             |             |             |             |             |             |
|-------|-------------|-------------|-------------|-------------|-------------|-------------|
| 86461 | actccatcaa  | ctccacccat  | gttttctttt  | ctcttatcaa  | gtgctaccga  | ttctcacggt  |
| 86521 | cttttagaat  | gaaccacttt  | tagtgatttc  | tgcgaatggt  | ttatcgggat  | atctaactgt  |
| 86581 | gttataaacc  | catgcacccg  | caatcgccac  | aagagttggc  | gcaactaagt  | atatccaaat  |
| 86641 | tcctttgtag  | caaccataga  | ccagtgcagg  | tcctaaactt  | cttcctggat  | tcacgcagcg  |
| 86701 | actcgatacc  | ggtctaataa  | aattgatgaa  | cataaccgta  | taaatcattt  | tttggaaattc |
| 86761 | ttactctaaa  | aaaaaaaaag  | ataagcacia  | taatagaaat  | ggtaactgat  | aacttacgcg  |
| 86821 | gcaattagca  | cgtaaagtag  | caccgttgat  | cctattgcta  | atccagcaag  | ttctccgac   |
| 86881 | tgaatattgc  | agcatttggt  | cccaatgtta  | agtttctcgt  | aaatttaaag  | accacagaaa  |
| 86941 | acaaatgtaa  | cttctgagag  | ggagcagtaa  | ttaataacac  | taatataagc  | catcgaattt  |
| 87001 | gacaacataa  | gaagatatga  | aaatactaac  | cgctctatta  | tcggtagcaa  | cgccagaaat  |
| 87061 | gatgaacatt  | agatagaaag  | tgacgataaa  | ctccatcgta  | aacgcctgaa  | gatctgatcc  |
| 87121 | cactgggtgat | gatccgataa  | acacatcgtg  | ttttccgcta  | caaacgtcgt  | gatcaagtcc  |
| 87181 | gaacaacaac  | cgtaatgtcg  | cagccgcgag  | cgttgatcct  | atcactgtgt  | atatgacata  |
| 87241 | agctggaacc  | taaaaaaatt  | caaagaacaa  | aaataaaata  | aattaattca  | ccagttcaca  |
| 87301 | ctaactaggg  | aagggaacca  | atcttggaag  | atattttgac  | gtttatataa  | caaaatatgg  |
| 87361 | acgtgtggaa  | aaactatata  | catacaaaaag | ttacataaca  | ttttaattta  | ttttgaaac   |
| 87421 | tagcaaaagt  | agatttgtcc  | ttacgtatct  | tcactcatct  | atagtaaacy  | ttgcattaaa  |
| 87481 | aacgctacgt  | atttgaataa  | cccaaagtct  | cgtgtgcaat  | acaagcaacc  | gatagctaaa  |
| 87541 | ctagatcaat  | ggaacaaaaa  | tacactaatg  | ttctttaatt  | agtttgttca  | tgaactcaa   |
| 87601 | aaacacacat  | aaaatacaaa  | acttgatcga  | tcattatata  | aaggctatat  | gtaattgtgt  |
| 87661 | atgtgttaag  | gacctgtttg  | agagggaaac  | ggccacaaga  | ggcgaaggca  | atggtaacgg  |
| 87721 | ccggattgat  | atgagcacca  | gagatgtgac  | caagagagta  | aatgaggacc  | ataatggtga  |
| 87781 | gtccccaac   | gatagcgatc  | cctggaagag  | tcacgacatt  | gtcgttttgc  | atgtttacaa  |
| 87841 | ccaccgatgc  | acaaccggtg  | aataccaaaa  | agtaggttcc  | aagaaactcc  | gcgatcaact  |
| 87901 | gaaaacatag  | cgtaaataaa  | accgagatgt  | cttgtgaatt  | ggtacaaaac  | agagtctttt  |
| 87961 | catttataac  | ttgtaaaaaca | tgttgatgat  | ggagagttaa  | aagtaaaaac  | cttttgtaa   |
| 88021 | aaaggacag   | agactgagag  | tagagagtct  | tgtttcttca  | aggttcttgg  | gttatgaatg  |
| 88081 | tcttccattt  | cttgttgatg  | ttcgacttca  | tccttgagat  | tcaccattac  | tacttcttct  |
| 88141 | ctggcggtgc  | catagccgtt  | tcccgagata  | tccgccataa  | gtgacttttc  | tctttttaga  |
| 88201 | aacaaagaag  | aggaaaagga  | ttgaactata  | aacgactgtt  | tatgacttgt  | gagaatgaga  |
| 88261 | agtttggtag  | cgattatctc  | ctattttattg | gcaaaccatgg | gggagagaga  | gacttctttg  |
| 88321 | acgattttta  | tattaccagt  | ttattaattg  | aaaaaaagaa  | gaagatgata  | tattgttaat  |
| 88381 | aaagcttttt  | taataataat  | aaattcctat  | gtttgtggag  | attctataacc | aggtctcaaa  |
| 88441 | ttcaattttc  | agggattaca  | attttttctt  | agatcaacaa  | atataaaatt  | tatcgaaaat  |
| 88501 | tttagaatgc  | tacatgcaga  | atttgtttgt  | tttgatcttg  | tgtgttgtgc  | agagagccta  |
| 88561 | tatcattcgt  | gcattgtcga  | catgcataac  | catccgcgcc  | taggattcaa  | atgttgcata  |
| 88621 | cttgcaatct  | actttttgtt  | tttaaatttt  | tattctactt  | tccaaatatt  | catttataat  |
| 88681 | cacataagta  | tatatacgtc  | attttatgcg  | ttgtttgtat  | ttcacataag  | tattcattta  |
| 88741 | gaacatctca  | tatcgaattc  | tgaatttcgg  | atataaagtc  | accggtcata  | tgttgttaca  |
| 88801 | cccaaatttg  | ttcgtatcat  | ataaacaana  | caaaattatg  | tcattgcaaac | tatagaataa  |
| 88861 | actatatcat  | ttatgagaaa  | ttgaaaaatg  | tcactagatg  | gaattgatga  | tggcctcttt  |
| 88921 | aagtcttcaa  | ctaccaagcg  | ggtaatacgg  | acatacttta  | tttagcttat  | agtttgtcat  |
| 88981 | gtgtacatat  | gtacacaaca  | ttataaaaaat | tactaaaaaa  | tttcaagata  | ttttatatat  |
| 89041 | accttgatgc  | caacgtaaca  | atcttgattg  | cgatccgtaa  | acttaatgta  | gtgtactgtt  |
| 89101 | tggatccgat  | catatcaacc  | tcaggtttga  | atccatacta  | acataataact | aaatgttaat  |
| 89161 | tatgatcaga  | atgtttttatt | tgcgacaata  | ctcaaaatgt  | catctctaga  | ttagggttaag |
| 89221 | ttcgaaccct  | ctttaatgga  | tgttagaatg  | tagggttgtg  | gccacggggc  | accagagaaa  |
| 89281 | aaatgaagtt  | tctttataat  | gtacaatttg  | aattatcagt  | aaattagcaa  | tgttaattcc  |
| 89341 | acatgtaaac  | acgtatgctg  | gttaatgggtg | acaagacaaa  | tcttaagagc  | tttcatgtta  |
| 89401 | cgtatcgatc  | cagatgtgca  | tgtatgtatg  | tgccaaaaaa  | ataggaggag  | tgaatatgaa  |
| 89461 | ttgaaattga  | gaacatacat  | atatgcaaaag | ggaagggtaaa | taaagaatat  | ttcagaaaga  |
| 89521 | aaaagaaaca  | ttgatgtaaa  | tgtaggagta  | tcaaagtcga  | tcaaaattag  | tagatcattg  |
| 89581 | acttaactca  | accaatgaat  | tgactatcat  | tttatattat  | tttaataagt  | tgtatgaaata |
| 89641 | aatgagttga  | atggactgat  | gaattatggg  | ggctacttaa  | tgtttccacc  | acgacactcg  |
| 89701 | gattcaattc  | attaactttt  | ttacatcatc  | ataactttat  | tataatcgat  | gatatacaac  |
| 89761 | ccatcatgat  | ataatcatac  | accatcatat  | tcacatcatc  | caacatcatt  | tcacagcat   |
| 89821 | gacttccgaa  | gctattatac  | gtgtgctaga  | tctatatctt  | tgtacgatgt  | gagagtgtta  |
| 89881 | cgagtagtat  | gtgtgcataa  | agtaaagtgg  | acataaattt  | gttaacgggt  | ctgttcacaa  |
| 89941 | cttacetgct  | aaaaatttct  | accaaacta   | tgtaactttt  | tttattatga  | cgctccacaa  |
| 90001 | tttctcgcta  | caatgttatt  | ccgtaatttt  | atatttttaa  | ttgcaatata  | tctggtttac  |



|       |            |             |             |            |             |             |
|-------|------------|-------------|-------------|------------|-------------|-------------|
| 90061 | gtatcaaaga | taatgcaaag  | gaaaattttta | tatagatatt | atcttcatct  | aaaatgggtt  |
| 90121 | atcagtatat | gtattaatgt  | taaaacacat  | tatcaatttc | accagggttt  | aaatagaaat  |
| 90181 | tccaaaaaaa | tatatatcta  | aatttggttt  | ttgaatttta | tctaaaaatc  | ttatgtgatt  |
| 90241 | tcttaaaatg | cagatattgt  | aattcaaaaac | cattaattga | attaaaaat   | attttaattt  |
| 90301 | tttgtaattt | ttggaaatca  | ttgaatgaga  | taagattttg | gttctatgtc  | caaatttagt  |
| 90361 | caaaatcagg | aacttgtaag  | ttgtaactaa  | aagaagccag | gaaggcaatt  | tttttttcta  |
| 90421 | acttcagaat | gcatacttgt  | aattttttat  | taagtttggt | ttaaatttga  | aggtgccacg  |
| 90481 | gatcacggga | aatcggtttt  | attactaata  | tggttgagtc | aaatttcagt  | cacatgtata  |
| 90541 | gtaactgtat | aattcaagat  | atgctaaata  | tcttttaaaa | cttttgta    | actgtatttt  |
| 90601 | aaaatcatga | attggattga  | catgtaattt  | tcttttattt | tattcggaaa  | ttattggctg  |
| 90661 | aataatatga | aatttgtagt  | tatatataat  | tttcaaaatt | agttcgaatc  | atcaataaaa  |
| 90721 | acctccatta | tttttttgct  | gaaaagataa  | ttttatttta | attaatcagg  | ccaagctttg  |
| 90781 | taagccgaaa | gacattgtcg  | gggtccaaaaa | atgaaacagt | acacgtacat  | taatcgaggt  |
| 90841 | tatggttacg | tagaaagaaa  | aatatataat  | ctagtttttc | gttaacatta  | aggctcaaaa  |
| 90901 | tagagcattt | cgtctacaca  | accacactta  | aattcagttt | ttttaccaat  | tagctaaaca  |
| 90961 | aatttatatt | gaatatagtt  | tatatataat  | tttcccgcca | cttcggaaat  | gcattgtagt  |
| 91021 | aaaaccatcg | tatattttga  | catattaata  | tattatgttc | gcatgagaaa  | ggaaggtttt  |
| 91081 | taacttcata | atacatactt  | gtaatatatt  | attaagtttg | atttaaaagg  | tgccatggat  |
| 91141 | cacgggaaat | cattttttat  | actattaagt  | ttgattcaaa | tttcagtcac  | atgtttggta  |
| 91201 | atcattctaa | gatatgctta  | atatctgtac  | aaccatcttt | ttgagttttg  | accatggaac  |
| 91261 | caaaattcga | taagattttca | cgctcgagaa  | aatagtataa | aattgatgtt  | acattttatt  |
| 91321 | cacaacttga | aataaataat  | gctacaccga  | ataagatata | ttttgtttta  | taaatagaaa  |
| 91381 | aaatgaaacc | tctttcctgt  | agaggtgaaa  | ataatattat | tgtatatgag  | tgttttttct  |
| 91441 | ttgcttaaac | tttttcttgt  | tttgtttttt  | acatgttaaa | tttactgacc  | aacaaaaaaa  |
| 91501 | ctttatgtac | aaagttttga  | aagaaaatcg  | aagacatgta | atcctatttg  | ggatccactt  |
| 91561 | atcaatcaca | cggatgagga  | gggtaaccga  | cctgtaaata | tgattatggt  | gcctctcatt  |
| 91621 | tcgttccttt | aaaatgtcat  | agatggttat  | ctcgaaggtc | atacgaatta  | agagataaaa  |
| 91681 | gatgcaagtg | tatgtcaaaa  | ccgttaaact  | tactaaatta | taataatact  | ctagaacatt  |
| 91741 | ttacatgcc  | ctcttattat  | atatttttgg  | ataagccaat | gaaggagttt  | tggatgcttt  |
| 91801 | aagttccgca | cactcttaga  | ttttctctgt  | tttatattga | actattcata  | caaatgaaa   |
| 91861 | ggtgagctct | ctaatacaac  | ttatatattt  | agtttcgata | tgtttctttg  | actttctttt  |
| 91921 | tttttttttt | tttttttttt  | tttttttgaa  | taccaggagg | ttctgggccc  | aagcccgtaa  |
| 91981 | tccctccagg | cccgaaccca  | caacatgtaa  | tattagtttc | gttccaagca  | ttactcgaac  |
| 92041 | cggcgacctc | taagcttcgc  | ctagggtctt  | taccaattga | gctaaccgaca | cttggttttc  |
| 92101 | tttgctgcta | tacttaaacc  | attaatacaa  | caaactctct | atacatgttc  | ttcaaaactg  |
| 92161 | tgaattgaca | ctaacaaatt  | tgggtatcca  | tcgggcagtc | cattggacgc  | tagatggatg  |
| 92221 | tccaggaaaa | taatggggac  | ccaaagagaa  | gcagataaac | aaacttgtgt  | tcatacgaac  |
| 92281 | atatatagat | gagagtattt  | tcaaaaagaa  | actttaaagg | ttgtctaata  | taagtaagaa  |
| 92341 | tccaaatatt | gcattataag  | acttggttagt | tagtagtaaa | gatgtatcta  | gtctaaaccc  |
| 92401 | gtataaaacc | ggctttaatt  | attatgttat  | atcaaaacat | accgggtttc  | taaaacgcgt  |
| 92461 | tgagacataa | acgtagattg  | ctaaaatgtc  | tagcacacga | taaaccagcg  | tttttatcaa  |
| 92521 | tagtttggtc | ttatcataaa  | atataaatag  | gatttaagga | ttttcatttg  | taatatataag |
| 92581 | agcgtaaagc | agtataatag  | caaacgcaag  | cagggcgatt | atcgtaggcc  | ttaatgcaac  |
| 92641 | cacccttgcc | atgtctcttg  | agtgcacatg  | aaaaggcaca | gttgctcagg  | acacattctc  |
| 92701 | cccatgttag | catatcataa  | cacctttcca  | ttgtcccca  | tggttgctcc  | tttgccatcc  |
| 92761 | ttatctcccc | tattacagta  | atagtccaaa  | cacatgaaat | aatctcagtt  | acttattaaa  |
| 92821 | aaaaaacaaa | aaaacaaata  | ttcgcttgat  | gatagggtgt | taatttgatt  | caacgacctc  |
| 92881 | ggtaggttat | ttttctctaa  | cataaaacta  | tataggagaa | cggttaagaa  | aagtttatggt |
| 92941 | gttataaata | cttggtgtgc  | tttcgaatac  | aagtgaagaa | caaactaatg  | aatttttggt  |
| 93001 | attgttttca | tgactattta  | cagagtagaa  | agcatgaaaa | cattcaatca  | tcataattca  |
| 93061 | taatctatgg | agtattggag  | tttcatgaac  | gtaacaactt | tgagaacaaa  | aatggtagta  |
| 93121 | tatatatgaa | acatgagaat  | tttataccaa  | ttttagagag | gcatttgggg  | tacgaaaacc  |
| 93181 | cttaatttct | caaacatata  | tcgtaccaaa  | aacataaatc | gtaccaagtc  | cagaaagcaa  |
| 93241 | ttttgaccgc | cgtagataga  | aaaaaatctg  | attacttggt | tccatttact  | tataatattt  |
| 93301 | caagaaagtg | taactaaaat  | caaatagaac  | aaaacgacaa | aacataactc  | agtttaataa  |
| 93361 | caaatctctt | aaaaatacta  | aaacaaattt  | tcttctctaa | atttccaatt  | caaacagcaa  |
| 93421 | tttgtcaatt | acctcaattc  | tctaaacatg  | tttctgcata | gatttagctt  | gtattgtcat  |
| 93481 | ctttaattca | taaaaccaca  | taaaagaatt  | tagcttgcta | ttacgaaact  | ctataatgta  |
| 93541 | atatagaatc | tcaatatcta  | attatgactc  | ataattgacg | taacaaactt  | aatttttatt  |
| 93601 | gtagaaaact | aacttggttt  | taataattag  | tttattttgg | atgattataa  | taatatatta  |

|       |             |             |             |             |             |             |
|-------|-------------|-------------|-------------|-------------|-------------|-------------|
| 93661 | tgacaattat  | aaaaaataca  | aacctaatac  | aaggatggtg  | aagatgcata  | gaacggtgac  |
| 93721 | agagagttgc  | aaggatttac  | tcatgtttgg  | tactccaagc  | gaattgataa  | tgtcttacga  |
| 93781 | ataaaaagaaa | tgaagaacaa  | cttgtagata  | tgtatataag  | aagtgatatt  | gatacacatt  |
| 93841 | gtgataactt  | agagatgcat  | tttgatcttg  | tacctaattt  | aagacattgt  | cttaattaga  |
| 93901 | accattagat  | atcttccctt  | tattgcaatg  | cattcttttc  | caatcaaaac  | aagaaaatcc  |
| 93961 | tgttgaattt  | ttgtaaaaga  | agatcatata  | tcttgtttag  | gataaaatag  | caattttaata |
| 94021 | tataaaaggt  | aaaaaagaag  | aatatatata  | tatatatata  | tataatagga  | gaaatatatt  |
| 94081 | ctcttaatat  | tactatatatt | ttgctatata  | aatggaatca  | agaaatatag  | aggcatatgt  |
| 94141 | atctcttgta  | aatggtaggg  | cagaacatct  | acattttatc  | ttgtaaatgt  | gtcatttcatt |
| 94201 | tagttacagt  | gtgctaacta  | aagagaagaa  | aagtaaccgc  | ttttcagtag  | tgtgaaaag   |
| 94261 | aaaacatggg  | agggcgtata  | tgtgtttttc  | ttagattgaa  | ctactttttg  | ttgaaatgta  |
| 94321 | aaatttttat  | acttgtagaa  | aagagttcat  | gtataaagtt  | ttgaaagaaa  | atcgaagaca  |
| 94381 | tgcaatccaa  | aatagccaac  | cgattattgt  | acctctcatt  | tttgttccct  | acaaatggca  |
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| 94501 | gtagtctccc  | aatctgggtt  | aggatcagac  | gtccccaaca  | atgtatctcc  | aaaccttaaa  |
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| 95041 | tacagtaata  | gttcaaacac  | ataaaaaaca  | atctcacttt  | cttatttctg  | taaaaaaaaa  |
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| 95221 | tgaatacttg  | tgttgcatcc  | ttagataata  | actcacaagt  | cactttaaaa  | acaactacaa  |
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| 95761 | tacgaataaa  | agatgatgaa  | gaacaactta  | tacatatgta  | tacaagaagt  | tatatctttg  |
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| 101521 | ctcaatggaa  | cacatcacat  | acacatcaat  | aagcacttca  | agtatcaaca | tggtaataga  |
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| 102301 | aaaataaaaac | agcagagaga  | gaaatatctg  | tgtatactca  | aaataaataa | ataaattaaa  |
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| 102481 | aaaaccgcat  | tttggtattt  | tgtcgttagg  | tgacgaagca  | atccattgag | aaggctcgctg |
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| 103321 | gctgcacctg  | tcagaattta  | ccatggattg  | agaccaatgt  | ctttttatcc | ataatcatca  |
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| 103441 | agttgtgtct  | cgatccaatc  | catcaagtat  | tcaacatact  | ttggagctga | aacctcaata  |
| 103501 | ggcttcttga  | ttgtacacc   | atcggcccat  | ctgtattcgt  | acctgaaacg | ttgcaaccga  |
| 103561 | cgcatttcac  | caatggaata  | gttacataatg | agtcagtagt  | tgatcatcga | gataattgtc  |
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| 103741 | gcacaaaaat  | tacttatata  | atgaagaaga  | gaaatctgta  | cttgggacca | gcagtcattg  |
| 103801 | tagaacagtt  | ctccgggggtg | caaaaactcg  | taagtgtacc  | aaataacaga | ttcacctgat  |
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| 103921 | aaaagtgatg  | gtgtagttat  | aagctcactg  | ttaactgcaa  | gccattcgtt | taaatcctct  |
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| 104221 | gcaaatccat  | agaatcagat  | aagcaaatc   | tacattaact  | tgaacaagat | tttgacaaga  |
| 104281 | atcattcagg  | acacattgac  | aatggtagta  | agttaacatt  | ggttccatca | agttctgaat  |
| 104341 | aatagaaaaa  | ttgaacaatc  | aaatcttcat  | tcacaacct   | tactcagcaa | atccacaaaa  |
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| 104641 | aatttcacga  | tcgcagacca  | aaacttgaag | acgactaaaa  | ataaaataac  | attcattttat |
| 104701 | tctttatttt  | aagagttcac  | acaacacaac | acaaagtaac  | cattttgaaa  | agtttcgaat  |
| 104761 | tacaagctct  | gtcaaagttc  | aagacttgga | taattattaa  | cggtagagata | atataagatc  |
| 104821 | agcggaaatt  | ttgtttcttc  | atcctcgctg | tgtgaagaag  | aacagagaga  | ttaaactgtg  |
| 104881 | tctgtagctt  | ttgtgggctg  | ggtaggagtt | tgggtttcag  | gcccaatagt  | attcctgcac  |
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| 105001 | taacttcact  | tacttgtgag  | gttgatcctc | tgaaatttca  | tctgtaatcc  | ttgctccaat  |
| 105061 | cctcggttca  | tcttctctag  | ctttcaattt | cggaatttcc  | tcaattgtgc  | atttctccag  |
| 105121 | attcgggaaa  | ttagctccaa  | gtactgataa | aacaggcaaa  | tcaagaaggt  | gaagcttacg  |
| 105181 | aagcttcgat  | aattctcctg  | cttttacttc | aaacaatctc  | tccaacttat  | cacagaactt  |
| 105241 | cacacgaaga  | atctcaaggt  | tatcaggaat | ctccgggaat  | agccatttga  | tgcttggaca  |
| 105301 | acaatctacg  | cttagcttct  | taaggttctt | gaaaatgaat  | cctcctttac  | tactgtataa  |
| 105361 | gcttgttagc  | aatggaagat  | ttgagatcca | aagagtctgc  | aatgatgggt  | atgatgattt  |
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| 105901 | gaatgattcc  | tcgattttat  | ccagattggt | gcaccccgaa  | acatcgaaga  | tcactagatg  |
| 105961 | tgttagcttc  | tcaagatttg  | gaagagcctt | tagcttagaa  | cagtttctta  | ggatgagctc  |
| 106021 | tttgaggtta  | gatagctctg  | agattttgtt | aggtaactca  | ccaagattag  | tttccgaaag  |
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| 106201 | tagcttgga   | cattttctta  | tgatgagctc | cttaaggtta  | gatagctctg  | agattttgtc  |
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| 106321 | aaaggatcca  | ttgatattct  | tcaacttaat | gcaaccagaa  | acgtcgaaaa  | cttcaagggtg |
| 106381 | tgtcagtttc  | tcaatgcttg  | gaagctcttc | aatcagtgag  | caattcctta  | acagaagctt  |
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| 107101 | atcgatgta   | tcgattagat  | cacagtctct | gataacaagt  | actcggaggt  | tcttttagctt |
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| 107221 | ttgcactctt  | ggtttctcaa  | agaacttccc | atgaacctct  | ctacgtaaac  | ggtttccgct  |
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| 107881 | gcccttgctc  | ttgcttaaaa  | tgcaagacat | caaagtaggt  | tctttgatct  | ctttgttatc  |
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| 111781 | ccttatcatt | gacaaagaaa  | acggatagag  | aagaactttg | cacagtgata | tagcaaaatg  |
| 111841 | ttaagactaa | ttgaatttgt  | acctttg     | acatggagaa | gatgacttcc | aaatttgcca  |
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| 112141 | cattcaagtt | gccaaagacc  | cgaatcaaga  | aagttcaaaa | ctaagagttt | acttgggtatg |
| 112201 | gagaatacat | atttatgaaa  | aaatgtgtga  | gagaaagaga | gagagtctga | ggtacatact  |
| 112261 | gttataagga | gctgcaagaa  | gaaaatttgt  | gggaagacca | atgccgagac | cagcaagtgt  |
| 112321 | tataccaaca | ctaaaacc    | caccgcagcc  | agcaccgaca | taaccaatga | cctcagggcc  |
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| 112561 | attatctttc | agtaccact   | gaaactaaat  | caaatccaat | gcacattgaa | ttgagaagct  |
| 112621 | gaatcaatgg | atattcaaca  | gtgtcaccaa  | caaaacataa | agctcatatt | tttccacag   |
| 112681 | attctctcga | aacccccata  | aaattcgaac  | cttttcagga | tcgcaacaa  | tccaataagt  |
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| 112921 | cttcgttcga | tttcttttgt  | tttctcagac  | gaattcacta | agagaaccag | tggatcaaaa  |
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| 114121 | aaatggtttt | gctgtactct  | ttgcttctga  | catttcttgc | tgcattgtct | acttctgttt  |
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| 114241 | tgacatatgg | caggagtttc  | tcataataat  | cctcgatttg | catatcgcg  | agaatccagt  |
| 114301 | cgctctagc  | cgaatatata  | tggctggcac  | tttccgatcc | aacaactaag | agcgatctat  |
| 114361 | gcttgacctc | ttcaaatatg  | aattcccaga  | gctctttggt | gaggcgtgtg | cgggatgtga  |
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| 115021 | tgaggcaaac | atcaaaaccg  | tcgtatccat  | ctttttctgt | tactttgaat | atgtaaaggg  |
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| 115141 | tgtcaacttt | ggtgaataaa  | gttccaaaca  | tatcaaagat | gtttgggaca | catggaatat  |
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|        |             |            |            |             |             |            |
|--------|-------------|------------|------------|-------------|-------------|------------|
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| 115381 | acctgatgat  | cctcctcaaa | acaagaagct | cgctgccttg  | tgggcacctt  | tcttgcctct |
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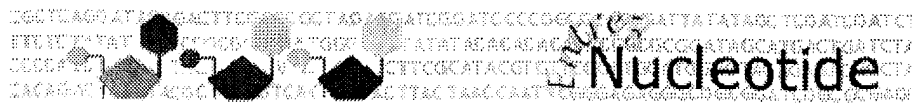
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☐ 1: Z97335. Arabidopsis thali...[gi:5280985]

Links

LOCUS ATFCA0 200576 bp DNA linear PLN 28-JUN-1999

DEFINITION Arabidopsis thaliana DNA chromosome 4, ESSA I FCA contig fragment No. 0.

ACCESSION Z97335

VERSION Z97335.2 GI:5280985

KEYWORDS .

SOURCE Arabidopsis thaliana (thale cress)

ORGANISM Arabidopsis thaliana

Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids; eurosids II; Brassicales; Brassicaceae; Arabidopsis.

REFERENCE 1

AUTHORS Bevan,M., Stiekema,W., Murphy,G., Wambutt,R., Pohl,T., Terry,N., Kreis,M., Kavanagh,T., Entian,K.D., Rieger,M., James,R., Puigdomenech,P., Hatzopoulos,P., Obermaier,B., Duesterhoft,A., Jones,J., Palme,K., Ansorge,W., Delseny,M., Bancroft,I., Mewes,H.W., Schueller,C. and Chalwatzis,N.

JOURNAL Unpublished

REFERENCE 2 (bases 1 to 200576)

AUTHORS EU Arabidopsis sequencing,project.

TITLE Direct Submission

JOURNAL Submitted (25-JUN-1999) MIPS, at the Max-Planck-Institut fuer Biochemie, Am Klopferspitz 18a, D-82152 Martinsried, FRG, E-mail: schuelle@mips.biochem.mpg.de,mayer@mips.biochem.mpg.de Project Coordinator: Mike Bevan, Molecular Genetics Department, Cambridge Laboratory, John Innes Centre, Colney Lane, NR4 7UJ Norwich, UK, E-mail: michael.bevan@bbsrc.ac.uk

COMMENT On Jun 30, 1999 this sequence version replaced gi:2244747. Information on performance of analysis and a more detailed annotation of this entry and other sequences of chromosomes 3, 4 and 5 can be viewed at: <http://www.mips.biochem.mpg.de/proj/thal/> this fragment has an overlap with ATFCA1 at the 3' end.

FEATURES

Location/Qualifiers

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 /db\_xref="UniProt/TREMBL:O23259"  
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 HILDKTWGRDEVVIPPVFTCGSLISLNLYDVLPNREFVSLPSLKVIVLDAVVFDED  
 FAFEMLVSGCPVLESLSVNKINLNDISENDDYLEVVIDAPRLHYLKLNDKRTASFIM  
 KNHGSLLKADIDFVFNLGSEYMFDPNYLPTRHIIRDFVLVGLSGVKDMISSSTLQVIY  
 DYSRCEQLPLFRNVSLRVEFADYRWEMLPIFLESCPNLKSIVLGFSIPPGKEGANIL  
 PGPRRFLTSLEYVKIAKPMMAEASEIKLKLNVSTMNGALGNSSASVSGGEGAGGPAPF  
 LVKTYEMVDDSSTDQIVSWSANNNSFIVWNHAEFSRLLLPTYFKHNNFSSFIRQLNTY  
 GFRKIDPERWEFLNDDFIKDQKHLKNIHRRKPIHSHSHPPASSTDQERAVLQEQMDK  
 LSREKAAIEAKLLKFKQKQVVAKHQFEEMTEHVDDMENRQKKLLNFLETAIRNPTFVK  
 NFGKKVEQLDISAYNKKRRLPEVEQSKPPSEDSHLDNSSGSSRRESGNIFHQNFNKL  
 RLELSPADSDMNMVSHSIQSSNEEGASPKGILSGGDPNTTLTKREGLPFAPEALELAD  
 TGTCPRLLLLNDNTRVETLQQLTSSEETDGSFSCHLNLTASAPLPDKTASQIAKTT  
 LKSQELNFNSIETSASEKNRGRQEIIVGGSQANAAPPARVNDVFWEQFLTERPGSSDN  
 EEASSTYRGNPYEEQEEKRNGSMMLRNNTKNIEQLTL"  
exon complement (35411..36565)  
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exon complement (36894..37147)

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exon      complement(38153..38288)
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        /number=3
intron    complement(38289..38377)
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exon      complement(38378..38518)
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exon      complement(38904..39290)
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intron    complement(39291..39383)
        /gene="dl3030c"
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exon      complement(39384..39561)
        /gene="dl3030c"
        /number=7
gene      42311..43852
        /gene="dl3035w"
CDS       join(42311..42901,42950..43406,43452..43852)
        /gene="dl3035w"
        /note="weak similarity to cytochrome P450, human"
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        /product="hypothetical protein"
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        /db_xref="GOA:O23260"
        /db_xref="UniProt/TREMBL:O23260"
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LFTDTDETAFSIPDVTQKSTSSEFTKDDNFSRFPDDPSPDSSCSGRYIYVHELPHYRFN
GDLLDNCFKITRGTEKDICPYIENYGFGPVIKNYENVLLKQSWFTTNQFMLEVI FHNK
MINYRCLTNDSSLASAVFVPFYAGLDMRYLWGFNITKEWGRMSGRDHFLVSGRIAWD
ERRQTDNESDWGSKLRLFPESRNMSMLSIESSSWKNDYAI PYP TCFHPRSVDEIVEWQ
ELMRSRKREYLF TTFAGAPRPEYKDSVRGKI IDECLESKKQCYLLDCNYGNVNCNPNV
VMKVFERNVSVFCLQPPGCI PVFFHPGTAYAQYKWHLPKNHSSYSVYLPVKDVKEWNIKI
KERLIEIPEERVVRLREEVIRLIPKVYADPKYGS DGS EDAFELAVKGMLERIEEVRE
MMRQKGKDGSDGFDDRDYKYTFSPYEEPQVLA"
exon      42311..42901
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        /number=1
intron    42902..42949
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        /number=1
exon      42950..43406
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intron      43407..43451
            /gene="dl3035w"
            /number=2
exon        43452..43852
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gene        48743..50124
            /gene="dl3040w"
CDS         join(48743..48871,48963..49025,49109..49175,49264..49364,
            49454..49498,49582..49620,49672..49863,49951..50124)
            /gene="dl3040w"
            /note="similar to K01A11.2 - Caenorhabditis elegans"
            /codon_start=1
            /product="hypothetical protein"
            /protein_id="CAB10179.1"
            /db_xref="GI:2244756"
            /db_xref="UniProt/TREMBL:O23261"
            /translation="MATKPTFQLFSSSQSGSLGLGFLDSSEPALPPPPPPVEVLSEFV
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            FFAGEWSEVHQVLPLVNSDGETNKKGGYDIIILMAETIYSISAQKSQYELIKRCLAYPD
            GAVYMAAKKYYFGVGGGTRQFLSMIEKDGKMMVYSMMYIKQQLHCSFSTMI I"
exon        48743..48871
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            /number=1
intron      48872..48962
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            /number=1
exon        48963..49025
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            /number=2
intron      49026..49108
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exon        49109..49175
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intron      49176..49263
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exon        49454..49498
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intron      49499..49581
            /gene="dl3040w"
            /number=5
exon        49582..49620
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            /number=6
intron      49621..49671
            /gene="dl3040w"
            /number=6
exon        49672..49863

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YSRGCCKHYRCGRDS"
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/feature="exon"
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56957..57188,57271..57498,57589..57784,57904..58057))
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56957..57188,57271..57498,57589..57784,57904..58057))
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/translation="strong similarity to selenium-binding protein,
hepatic, mouse"
contains EST gb:416465"
/feature="product"
/product="selenium-binding protein like"
/feature="protein_id"
/protein_id="CAB10182.1"
/feature="db_xref"
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/db_xref="UniProt/Swiss-Prot:O23264"
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DASVDRRYLVLPISLGRIYAIIDTKENPRAPSLYKYVDPKEIADKTGLAFPHTAHCLA
TGEILVSLGDEEGNAKNGNGLLLDSDFNINRWEKPGHSPLYGYDFWYQPRHKTMS
TSWGAPKAFSKGFNLQHVADGLYGSHLHVYSWPGGEIKQLIDLGPGLLPLEIRFLHD
PSKDTGFVGSALSSNMIRFFKNSDETWSHEVVISVKPLKVENWILPEMPGLITDFLIS
LDDRFIYFVNWHLGDIRQYNIEDPKNPVLTGQIWWGGLLQKGSFVKAVGEDGNTFQFE
VPQIKGKSLRGGPQMIQLSLDGKRLYATNSLFSAWDRQFYPEIMEKGSIIQIDVDTE
KGGLTINPDFVDFGDEPDGPSLAHEMRYPPGGDCTSDIWI"

exon      complement(56013..56294)
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           /number=1
intron    complement(56295..56380)
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exon      complement(56381..56653)
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intron    complement(56654..56744)
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           /number=2
exon      complement(56745..56852)
           /gene="dl3055c"
           /number=3
intron    complement(56853..56956)
           /gene="dl3055c"
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exon      complement(56957..57188)
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intron    complement(57189..57270)
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exon      complement(57271..57498)
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intron    complement(57499..57588)
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exon      complement(57589..57784)
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           /number=6
intron    complement(57785..57903)
           /gene="dl3055c"
           /number=6
exon      complement(57904..58057)
           /gene="dl3055c"
           /number=7
gene      58583..60720
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gene      complement(join(58583..58864,58952..59196,59303..59446,
59538..59962,60043..60238,60576..60720))
           /gene="dl3061c"
CDS       complement(join(58583..58864,58952..59196,59303..59446,
59538..59962,60043..60238,60576..60720))
           /gene="dl3061c"
           /note="a non-consensus splicing site was generated
strong similarity to selenium-binding protein, hepatic,
mouse"

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/protein_id="CAB46000.1"
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/db_xref="UniProt/TREMBL:O23265"
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ADRRYLVLPLGLISGRIYAIIDTKTDPKAPSLYKVVEPKEIAEKTGLAFPHTSHCLASGD
MLVSCLGDKEGNAKGNGFLLLDSDFNVKSRRWDKPGHGPLFGYDFWYQPRFKTMISTSW
GAPKAFSKGFNLQHVADGLYGSHLHIYQWPEGEMKQITYWVFVVMWLQIRFLHDPSKD
TGYVGSALSSNMIRFFKNSDDTWSHEAIENWILPEMPGLITDFLISLDDRFFYFVNWL
HGDIRQYNIEDPKNPVLTGQIWVGGLLQKGSPYKAVGEDGNTYQFDVPQIKGKSLRAG
PQMIQLSLDGKRLYATNSLFSAWDRQFYPEIMEKGSIIQIDVDTDKGGLTLNPDDFFV
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intron complement(60239..60575)
/gene="dl3061c"
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exon complement(60576..60720)
/gene="dl3061c"
/number=6
gene 61404..65452
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gene complement(join(61404..61467,61541..62548,62591..63331,
64429..64583,65360..65452))
/gene="dl3066c"
CDS complement(join(61404..61467,61541..62548,62591..63331,
64429..64583,65360..65452))
/gene="dl3066c"
/note="similar to hypothetical protein - Arabidopsis
thaliana"
/codon_start=1
/product="hypothetical protein"

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/db_xref="UniProt/TreMBL:O23266"
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NGFRKSIVRRKKLLFSLTFIFMFKLFVFFDFGSYFSRMNRTLTTAKALHAHIVKLG
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SSVGSSSGLRPDDFVSALVKACANLGSIDHGRQVHCHFIVSEYANDEVVKSSLVDMY
AKCGLLSAKAVFDSIRVKNTISWTAMVSGYAKSGRKEEALELFRILPVKNLYSWTAL
ISGFVQSGKGLEAFSVFTEMRREVRVDIILDPLVLSSIVGACANLAASIAGRQVHGNA
IMYAKCSDVIAAKDIFSRMRHRDVVSWTSLIVGMAQHQAQAEKALALYDDMVSHGVKPN
EVTTFVGLIYACSHVGFVEKGRELFQSMFKDYGIRPSLQHYTCLLDLLGRSGLLDEAEN
LIHTMPFPPEPTWAALLSACKRQGRGQMGIADHLVSSFKLKDPSTYILLSNIYAS
ASLWGKVSEARRKLGEMEVKDPGHSSVEVRKETEVFYAGETSHPLKEDI FRLKKLE
EEMRIRNGYVPDTSWILHDMDEQEKEKLLFWHSERSAVAYGLLKAVPGTPRIVKNLR
VCGDCHVVLKHISEITEREIIVRDATRYHHFKGGKCSNDFCNYGHAKSIFILNKETI
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intron    complement(61468..61540)
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exon      complement(61541..62548)
           /gene="dl3066c"
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intron    complement(62549..62590)
           /gene="dl3066c"
           /number=2
exon      complement(62591..63331)
           /gene="dl3066c"
           /number=3
intron    complement(63332..64428)
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           /number=3
exon      complement(64429..64583)
           /gene="dl3066c"
           /number=4
intron    complement(64584..65359)
           /gene="dl3066c"
           /number=4
gene      65297..66050
           /gene="dl3070w"
CDS       join(65297..65483,65782..66050)
           /gene="dl3070w"
           /note="strong similarity to major latex protein type 1,
Arabidopsis thaliana
contains EST gb:948081"
           /codon_start=1
           /product="major latex protein like"
           /protein_id="CAB10185.1"
           /db_xref="GI:2244762"
           /db_xref="UniProt/TreMBL:O23267"
           /translation="MATSGTYVTEVPLKGSAAEKHYKRWNRNENHLFPDAIGHHIQGVTV
HDGEWDSHGALKIWNYYTLDGKPEMFKERREIDENMAVT FVGLEGHVMEQLKVYDTIL
QFIQKSPDDIVCKITMTWEKRADDSPEPSNYMKLVKSLAADMDAHVLKA"
exon      65297..65483
           /gene="dl3070w"
           /number=1
exon      complement(65360..65452)
           /gene="dl3066c"

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intron      65484..65781
            /gene="dl3070w"
            /number=1
exon        65782..66050
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            /number=2
gene         70014..75877
            /gene="dl3075c"
gene         complement(join(70014..70106,70202..70259,70335..70450,
70549..70628,70728..70887,71046..71183,71517..71597,
71699..71752,71835..71993,72105..72210,72334..72401,
72608..72757,72891..73006,73078..73286,73740..73812,
74410..74524,75126..75311,75743..75877))
            /gene="dl3075c"
CDS          complement(join(70014..70106,70202..70259,70335..70450,
70549..70628,70728..70887,71046..71183,71517..71597,
71699..71752,71835..71993,72105..72210,72334..72401,
72608..72757,72891..73006,73078..73286,73740..73812,
74410..74524,75126..75311,75743..75877))
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napus"
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            /product="AMP-binding protein"
            /protein_id="CAB10186.1"
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            /db_xref="GOA:O23268"
            /db_xref="UniProt/TREMBL:O23268"
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LTYKQLEQEILDFAEGLRVLGKADEKIALFADNSCRWLVSDDQAVNVVRGSRSSVEE
LLQIYRHSESAIVVDNPEFFNRIAESFTSKASLRFLILLWGEKSSSLVTQGMQIPVYS
YAEIINQGQESRAKLSASNDTRSyrNQFIDSDDTAAIMYTSgTTGNPKGVMLTHRLL
HQIKHLSKYVPAQAGDKFLSMLPSWHAYERASEYFIFTCGVEQMYTSIRYLKDDLKRY
QPNYIVSVPLVYETLYSGIQKQISASSAGRKFLALTLIKVSMAYMEMKRIYEGMCLTK
EQKPPMYIVAFVDWLWARVIAALLWPLHMLAKKLIYKKIHSSIGISKAGISGGSLPI
HVDKFFFAIGVILQNGYGLTETSPVVCARTLSCNVLGSGHPMHGTEFKIVDPETNNV
LPPGSGKGIKVRGPQVMKGYKPNSTTKQVLNESGWENTGDTGWIAPHHSKGRSRHCG
GVIVLEGRAKDTIVLSTGENVEPLEIEEAAMRSRVIEQIVVIGQDRRLGAIIPNKE
EAQRVDPETSKETLKS LVYQELRKWTSECSFQVGPVLIVDDPFTIDNGLMTPTMKIRR
DMVVAKYKEEIDQLYS"
exon        complement(70014..70106)
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intron      complement(70107..70201)
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exon        complement(70202..70259)
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            /number=2
intron      complement(70260..70334)
            /gene="dl3075c"
            /number=2
exon        complement(70335..70450)
            /gene="dl3075c"
            /number=3
intron      complement(70451..70548)
            /gene="dl3075c"
            /number=3

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| <u>exon</u>   | complement (70549..70628)<br>/gene="dl3075c"<br>/number=4  |
| <u>intron</u> | complement (70629..70727)<br>/gene="dl3075c"<br>/number=4  |
| <u>exon</u>   | complement (70728..70887)<br>/gene="dl3075c"<br>/number=5  |
| <u>intron</u> | complement (70888..71045)<br>/gene="dl3075c"<br>/number=5  |
| <u>exon</u>   | complement (71046..71183)<br>/gene="dl3075c"<br>/number=6  |
| <u>intron</u> | complement (71184..71516)<br>/gene="dl3075c"<br>/number=6  |
| <u>exon</u>   | complement (71517..71597)<br>/gene="dl3075c"<br>/number=7  |
| <u>intron</u> | complement (71598..71698)<br>/gene="dl3075c"<br>/number=7  |
| <u>exon</u>   | complement (71699..71752)<br>/gene="dl3075c"<br>/number=8  |
| <u>intron</u> | complement (71753..71834)<br>/gene="dl3075c"<br>/number=8  |
| <u>exon</u>   | complement (71835..71993)<br>/gene="dl3075c"<br>/number=9  |
| <u>intron</u> | complement (71994..72104)<br>/gene="dl3075c"<br>/number=9  |
| <u>exon</u>   | complement (72105..72210)<br>/gene="dl3075c"<br>/number=10 |
| <u>intron</u> | complement (72211..72333)<br>/gene="dl3075c"<br>/number=10 |
| <u>exon</u>   | complement (72334..72401)<br>/gene="dl3075c"<br>/number=11 |
| <u>intron</u> | complement (72402..72607)<br>/gene="dl3075c"<br>/number=11 |
| <u>exon</u>   | complement (72608..72757)<br>/gene="dl3075c"<br>/number=12 |
| <u>intron</u> | complement (72758..72890)<br>/gene="dl3075c"<br>/number=12 |
| <u>exon</u>   | complement (72891..73006)<br>/gene="dl3075c"<br>/number=13 |
| <u>intron</u> | complement (73007..73077)<br>/gene="dl3075c"<br>/number=13 |

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intron complement(73287..73739)  
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intron complement(73813..74409)  
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exon complement(75126..75311)  
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intron complement(75312..75742)  
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 /number=17  
exon complement(75743..75877)  
 /gene="dl3075c"  
 /number=18  
gene 76589..78184  
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gene complement(join(76589..76626,76704..78056,78139..78184))  
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CDS complement(join(76589..76626,76704..78056,78139..78184))  
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 3-glucanase homolog"  
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 /product="A6 anther-specific protein"  
 /protein\_id="CAB10187.1"  
 /db\_xref="GI:2244764"  
 /db\_xref="GOA:Q06915"  
 /db\_xref="UniProt/Swiss-Prot:Q06915"  
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| <u>intron</u> | complement(113753..113897) |
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| <u>exon</u>   | complement(116937..117725) |
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| <u>intron</u> | complement(119444..119518) |
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| <u>intron</u> | complement(119643..119729) |
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    exon        complement(122622..122900)
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                    127537..127679,127874..127949,128069..128238,
                    128362..128443,129191..129268,129721..129882,
                    129981..130244,130568..130672,130772..130918)
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VAAGLLGACLPGTGARIVALVGGPCTEGPGTIISKDLSDPVRSHKDLKDAA PYYKKA  
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MIQPSLTSYSFNSGPQAALLDVASIAADKILLLLDAYFSVVVFHGMTISQWRNMGYHHQ  
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| <u>intron</u> | 126553..126663<br>/gene="dl3120w"<br>/number=2 |
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| <u>intron</u> | 126826..127536<br>/gene="dl3120w"<br>/number=3 |
| <u>exon</u>   | 127537..127679<br>/gene="dl3120w"<br>/number=4 |
| <u>intron</u> | 127680..127873<br>/gene="dl3120w"<br>/number=4 |
| <u>exon</u>   | 127874..127949<br>/gene="dl3120w"<br>/number=5 |
| <u>intron</u> | 127950..128068<br>/gene="dl3120w"<br>/number=5 |
| <u>exon</u>   | 128069..128238<br>/gene="dl3120w"<br>/number=6 |
| <u>intron</u> | 128239..128361<br>/gene="dl3120w"<br>/number=6 |
| <u>exon</u>   | 128362..128443<br>/gene="dl3120w"<br>/number=7 |
| <u>intron</u> | 128444..129190                                 |

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        /db_xref="UniProt/TREMBL:O23276"
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        LRMWRESCVRPDDFTLPLILRACSASREAKSGDLIHVLCLKLGFSSSLFVSSALVIMY
        VDMGKLLHAPMFGGYVQQGEAMLGLAMFREMGSFGFALDSVVMHGKSVHGWCIIRCSC
        LGLNLGNAITDMYVKCSILDYAHTVFVNMSRRDVISWSSLIILGYGLDGDVVMSFKLFD
        EMLKEGIEPNAVTFGLVLSACAHGGLVEKSWLYFRMQEYNIVPELKHYASVADCMR
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 ILPNMKMTFCFFFQQLQVFDTWKNLEPSRISENNYERIIIRFLCEEKSMSEAIRAFRSMI  
 DDHELSPSLEIYNSIIHSYADDGKFEEAMFYLNHMKENGLLPITETYDGLIEAYGKWK  
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 GDFTSIELLLSELRIKHVKLDLVTVGIVFDLSEARFDGTGVFMTWKKIGFLDKPVEMK  
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DAVCEFSRSDSFKEETATNFPKGTENPGETQQCNNSSTACEMKSSEVVQDSCEVPPV
EVESASENRQGAQHSTEGHSMSSSETVIESSQEAQVIDGGDTISNDRLETECKGKLTKE
SQSKLASALGKREDTSDSSWNDEVIYSDVEGPGYGSSEATSMTHPDEASCIVSEDPV
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/ number=5
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149508..149610,149693..149906,150195..150314,
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149508..149610,149693..149906,150195..150314,
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152089..152177,152273..152405,152494..152661))
/ gene="dl3145c"
/ note="this enzyme converts phytoene into zeta-carotene
via the intermediary of phytofluene by the symmetrical
introduction of two double bonds at the c-11 and c-11'
positions of phytoene
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exon complement (148805..148992)
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| <u>intron</u> | complement (149611..149692)<br>/gene="dl3145c"<br>/number=6  |
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| <u>intron</u> | complement (150692..151255)<br>/gene="dl3145c"<br>/number=9  |
| <u>exon</u>   | complement (151256..151411)<br>/gene="dl3145c"<br>/number=10 |
| <u>intron</u> | complement (151412..151588)<br>/gene="dl3145c"<br>/number=10 |
| <u>exon</u>   | complement (151589..151646)<br>/gene="dl3145c"<br>/number=11 |
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| <u>exon</u>   | complement (152089..152177)<br>/gene="dl3145c"<br>/number=12 |
| <u>intron</u> | complement (152178..152272)<br>/gene="dl3145c"<br>/number=12 |
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            RRRDGOISSSLVSSSDPTTIHPTDLVNLYRLSAISHVEHQNSNPCSPGSMTPSPVSG
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            QGLKEKLLARNNSVKELSKGVQREMNAGIAGVARMIERMDFSSKRFGGSAHVSTSTAT
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exon        154548..154610
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exon        155529..155636
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exon 155716..156046  
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 159095..159401,159953..160176,160228..160290,  
 160369..160452,160548..160624,160779..161022))  
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 160369..160452,160548..160624,160779..161022))  
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 VLGHNDPLFRRAQLKALVSIHGEAAGKGGE LTHDETTIISGALDLTEKTAQEAMTPIE  
 STFSLDVNSKLDVRPANMPYDIILNEFQKGSSHMAAVVKVKGKSKGHPSTLHEENSGE  
 SNVSSNSELTAPELLLKREGNHDVIVRIDKANGQSFISEAGRQGFSTSEEIEDGDE  
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 162934..163329,163489..163665,163809..163876,  
 163974..164045,164162..164245,164312..164470,  
 164579..164662,164757..164833,164919..165165))  
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 164579..164662,164757..164833,164919..165165))  
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 NAMAMEGLPIYLDKLENEYVAIILSVTFVLAYGEVIPQAICTRYGLAVGANFVWLVRIL  
 LMTLCYPIAFPIGKVNIVCLVKNVLECSLILDLVLGHNDALFRRALQKALVSIHSQEA  
 GKGGELTHDETTIISGALDLTEKTAQEAMTPPIESTFSLDVNSKLDWEAMGKILARGHS  
 RVPVYSGNPKNVIGLLLVMLLTLLIHLVSMVAYHVSANSNQEIIVLFSRVPADMPDYDIL  
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 IDKANGQSFFQNNESGPHGFSHTSEAIEDGEVIGIITLEDVFEELLQEEIVDETDEYV  
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/db_xref="UniProt/TreMBL:O23283"
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PVVLLIDPITGQKMRMWSGVIEPQGFLDLMKYMDSGPHEHVASLTSNKRKTEKISC
SSNNADDQDMATFWGNAIEEEKTVIKSGKEETFTSDRVVAPSWGPEFEDIMTLSEHEE
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EDNWSSRSNNNQVVAPTWEKELEEQDEWEIWSSRSDDDFVPPFMGDEYEDPDEVKEE
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SSDGRVIVYDDSSKGGKATKVTIKDKKLEKEVIEAMTVGFLRDGLKFYLSYRSSDHQP
VITYETSNPKLENLTIHLPVPTGTKIHNLMAMSSIPVQDKDWVVGKLSGSRINPLS
SLMFSKRDQRFYIPSYGGNYLCYLDLNSKEGDDHFNRSRQENGQPSFIDLIDYENLPESV
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DEKKKTMIYTEHIGDLCIFLGHSEAF CIPASTSCGLEPNCIYFVGNNFGVYDLTTETC  
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exon complement (176327..176653)  
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gene 176409..179085  
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NDGKCWKFCMLVAKSGVLCIGSIQIDGQKHTAPWIPEDNSICCKEHPSVGRCLPNIDD  
SAEKGKGCWKFCIEGCETGGFCKLFGHKHICHNCNSG"

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 FSR SHELELQHQS KYTISGINIFRFLVKQINQIFHQVAHIAGDDNRPSVRETRTVQRN  
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 HDDYSVDTLQKIGTNLAIIERLVEMLNWRDKNQEDVRMSAAEILSRLASKKQNSLRVA  
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intron 182468..182543  
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185309..185407,185652..185744,185797..185980,  
186331..186425,186849..186975,187203..187306,  
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184759..184829,184908..184962,185036..185206,  
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186331..186425,186849..186975,187203..187306,  
187520..187601,187974..188071,188869..188952))  
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| <u>intron</u> | complement(185408..185651) |
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ORIGIN

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|       |             |             |             |            |             |             |
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| 12661 | tctaccagat  | ccaccaaacc  | ctcaaaaacaa | tctgaaccgt | tcatttccatt | ttgacctcat  |
| 12721 | ctatatattc  | tctgtcactc  | cctttctctt  | ctcctcgac  | acacttctct  | ctctctctct  |
| 12781 | ctctgcctcc  | tttcggattc  | aaatctcaga  | tctagctcaa | ccatggcggt  | gctcgtcgag  |
| 12841 | aagacctcaa  | gtggccgtga  | atacaaggtc  | aaagacatgt | ctcaagccga  | tttcgggtcgt |
| 12901 | ctcgaactcg  | agctcgccga  | agttgagatg  | cctggactca | tggcttgctg  | taccgaattc  |
| 12961 | ggaccttctc  | agccattcaa  | aggcgctaga  | atcaccggat | ctcttcacat  | gaccatccaa  |
| 13021 | accgccgtac  | tcatcgaaac  | cctaactgct  | ctcggtgctg | aagtcagatg  | gtgttcctgc  |
| 13081 | aacatctttt  | ccactcaaga  | ccacgccgcc  | gcagccatcg | ctcgtgactc  | cgcgcgtgtt  |
| 13141 | ttcgcctgga  | aaggtgagac  | tcttcaggag  | tactggtggt | gtaccgagcg  | tgtcttagat  |
| 13201 | tgggggtccag | gtggtggtcc  | tgatctgatt  | gttgatgatg | gtggtgacgc  | tactcttttg  |
| 13261 | attcatgagg  | gtgttaaagc  | tgaggagatc  | tttgagaaga | ctggtcaagt  | tcttgatcct  |
| 13321 | acttctactg  | ataaccctga  | gtttcagatc  | gtgttgctta | ttatcaagga  | aggtcttcaa  |
| 13381 | gttgatccta  | agaagtacca  | caagatgaag  | gagagacttg | ttggtgtctc  | tgaggaaact  |
| 13441 | accactggtg  | ttaagaggct  | ttaccagatg  | cagcaaaatg | gaactctttt  | gttccttccc  |
| 13501 | attaacgtta  | acgactctgt  | caccaagagc  | aaggtattga | tcttcagatt  | tggttcttta  |
| 13561 | ctagtgatga  | taaatctgct  | aggtctttag  | ctctgtagtt | tttgatgcga  | taggcttaac  |
| 13621 | aacaacataa  | tcactaagta  | gaagcaagct  | tttcattggt | ggttggtgaa  | agtattacga  |
| 13681 | tctagtagag  | aaaagtcctt  | ccttggttac  | agaatttgca | tgaaaagtca  | atatttctca  |
| 13741 | tgctttcttt  | gattttatat  | tcaacgtttt  | gtttacactt | atgtgctggt  | actgataaat  |
| 13801 | tcatttggtc  | ttgatttaca  | gttcgacaac  | ttgtatggtt | gccgtcactc  | actccctgat  |
| 13861 | ggtctcatga  | gggccactga  | tgcatgatc   | gctggaaagg | ttgctgttat  | ctgtggatat  |
| 13921 | ggtgatgttg  | gaaaggggtg  | tgctgctgcc  | atgaagactg | ctggtgctag  | agtcattgtg  |
| 13981 | actgagattg  | atcccatctg  | tgcccttcaa  | gctttgatgg | aaggacttca  | ggttcttacc  |
| 14041 | cttgaggatg  | ttgtctcaga  | agctgatata  | tttgtcacca | ccaccggtaa  | caaagacatc  |
| 14101 | atcatggtcg  | accacatgag  | gaagatgaag  | aacaacgcta | ttgtgtgcaa  | cattggtcac  |
| 14161 | tttgacaatg  | agattgacat  | gcttggactt  | gagacttacc | ctggtgtgaa  | gcgtatcacc  |
| 14221 | atcaagccac  | agactgacag  | gtgggtgttc  | ccagagacca | aggctggaat  | cattgtcttg  |
| 14281 | gtcaggggtc  | gtctgatgaa  | cttgggtgtg  | gccactggtc | acccaagttt  | cgtgatgtct  |
| 14341 | tgctctttca  | ccaaccaggt  | gattgccag   | ctcgagctct | ggaacgagaa  | agcaagcgga  |
| 14401 | aagtacgaga  | agaaggtgta  | cgttcttccc  | aagcatttgg | atgagaaggt  | tgacttactt  |
| 14461 | cacttgggca  | agcttggagc  | caggcttaca  | aagctgtcaa | aggaccaatc  | tgactacgtc  |
| 14521 | agcattccaa  | ttgagggacc  | atacaagcct  | cctcactaca | ggtactgaga  | gagagagaga  |
| 14581 | gtcgacaaa   | cggttcagggt | tggatcttac  | ttgtgggttt | gtgttgggtt  | gtggtgggag  |
| 14641 | agtggaaacag | tttgagatat  | tggctctctg  | atgaagttga | ccaaatatca  | gtattaataa  |
| 14701 | gggttattgg  | cttttgaagg  | ttgtgcttgt  | tttctccatt | tttcatgaaa  | cttaaattag  |
| 14761 | tttttggttt  | agtttccctc  | ttgattttat  | tttgtgtgtt | ctgttttagcg | ttgtactctt  |
| 14821 | caaacaaatg  | agaaaccaa   | aaaaaagggt  | aaacttggtt | tcggcatccc  | agtgttagcg  |
| 14881 | acttttggtg  | aatgaatgtc  | tcaaagtctc  | atctttaata | atgtgtgtta  | ggacacgaac  |
| 14941 | aacacatggt  | tcgattcgtg  | ggggatttta  | tggttgtagt | tattatcgta  | cacgtttcaa  |
| 15001 | agttctctta  | agtattcaaa  | aaggcttttc  | caatataaat | ttttgatagc  | atttagctat  |
| 15061 | aagattcgtt  | ttcattttct  | tcaattctat  | gtcatcactg | ataaaatctg  | ctttgaaaat  |
| 15121 | ttcaaaaatt  | attacttttg  | caagaagaat  | gtgaacgttc | ctacaaagag  | aggggtagaa  |
| 15181 | aataaaaaat  | ggactcgaag  | taggaacca   | aaccgactg  | aaaatactca  | agagtccaag  |
| 15241 | cccgctctag  | ataaatacca  | aaatgggtct  | taaggcttgg | tattcgggta  | catgataata  |
| 15301 | ctgatccga   | actgaaacat  | gaactgttta  | cccgaacca  | gtggcggaac  | tacgtagggg  |
| 15361 | gcaggttaaa  | attcaaagtg  | gtgaacgagt  | acggcctcga | gagtttatgg  | agtaagattc  |
| 15421 | gaattagcgt  | ttcctacgaa  | acgcatagaa  | ccagtagctt | cgaccaagaa  | tgatgaggag  |
| 15481 | gttcttctgg  | ttctcgatgc  | aaacttgggc  | ttgtacaact | ttgagtgtag  | tacttgagag  |
| 15541 | gaattaatct  | agaaatccac  | ggtgttgaa   | tcgacaaatt | tctacgtctt  | atcaccaaaa  |
| 15601 | ctcatacgtt  | atagagatga  | attgaggacc  | tccaatgttc | atttctttgg  | agtttataga  |
| 15661 | tttggtggtt  | tatttacatt  | gttaagacta  | ctttcttgat | tttctatact  | tactaaaaat  |
| 15721 | aaactataga  | tgatttggtg  | ttattaatga  | taattttaat | actgcttccc  | tttctttcat  |
| 15781 | gccaatctga  | aacacatcgc  | tgagaatttc  | caggacttat | tgcaagttta  | atttgctttc  |
| 15841 | tcacgatttt  | tcctttgctc  | gtgtaattag  | caaaaatctc | agaatcctaa  | gtgaaaagat  |
| 15901 | tctaatttgg  | tccaaaagca  | cccaaaaaca  | agcaaaacaa | cacccaaatt  | tatcaatcaa  |
| 15961 | tctacaaaaa  | aaacttaata  | taatttatag  | atctcaataa | ttgaacattg  | ataaccaact  |
| 16021 | agtggcagag  | ttacatatat  | tataacaatt  | cttatgtcaa | aaacacatat  | ataacaacag  |
| 16081 | caatgcaaaa  | gcttaatcat  | ataatttact  | tgctcgggcc | aaaaagcttc  | caattttggc  |
| 16141 | aatttcttgg  | atcttacctt  | catgtgttga  | tgctcgttgt | gtctctagcg  | catctggtaa  |

|       |             |             |             |             |             |             |
|-------|-------------|-------------|-------------|-------------|-------------|-------------|
| 16201 | tggtgtcaca  | gcctctgctg  | taagaattag  | cttgtccaga  | gcgacaatcg  | tagtaagaag  |
| 16261 | ctcctggttt  | ctgacaagga  | accatgtctc  | tccttagcgt  | ttcgtagccg  | atgtaccggt  |
| 16321 | tctgcgccat  | cagtactctc  | cggtgatct   | cagttggcat  | tagatcttca  | tcttctccga  |
| 16381 | tgatactggt  | tcggatcaac  | attgcgtcga  | tctctccggt  | gggagacgga  | atcgggaaacg |
| 16441 | catcggcgga  | gattaagagg  | aaaagaatgg  | cgaaaatcac  | caacgctgta  | gagttaaaca  |
| 16501 | tgtcgatggt  | ggaaattgca  | gattgtgccg  | acgcgatctc  | tctctatttc  | tctgtctcta  |
| 16561 | agcagaagaa  | gaagcagaaa  | tggggtagt   | tggtgaagaa  | gaagagggtga | caaagtaca   |
| 16621 | gtcaacttaa  | accggattta  | ggttttggtt  | taagtgttcg  | gatttagatc  | ggccactcaa  |
| 16681 | tttaaaccgg  | ccggtttgcg  | aaacaattaa  | agtagattct  | atcaacgttt  | agaagcaagt  |
| 16741 | cttataccaat | tgtagtcagc  | ttaactattt  | atctaaccag  | gaaaaaaaaat | tataaccctt  |
| 16801 | tcagataaaa  | tggtgggtcaa | caaaactatt  | taatcataat  | catgaacctg  | agcataaatt  |
| 16861 | aataacaacc  | cctttgacca  | aatcatcatt  | gtttaaataa  | ccaaataaga  | gaaagaaata  |
| 16921 | ataataaata  | taagccatag  | tatagaaaaa  | ccatagccaa  | aacataaaca  | gtcaattccc  |
| 16981 | aacatcaaaa  | tatatcaaaa  | agaaaggtaa  | attgggttgt  | ataatttcat  | agaagaatgtt |
| 17041 | gaaaggaaac  | cacttgaatc  | tcaaagagag  | tcaataacat  | ctttcagatt  | tttgtaaaat  |
| 17101 | ctaataattct | tactatcagt  | gtacttttct  | acagtttttt  | tttggtttct  | caagaatatt  |
| 17161 | ctaacaaact  | tttgttgtat  | tctctagcaa  | cataaacaat  | ggccactcag  | aagttttcat  |
| 17221 | attttctctt  | agttttgttg  | atgggtgttg  | ctctcatcct  | tccatcaata  | atttcaggta  |
| 17281 | acacatattt  | tgccggagtc  | aaaataaata  | atcaaaattc  | cctggaatca  | gaaacataaa  |
| 17341 | catgcatgca  | ctataataca  | aattcataaa  | actaggaatt  | gatcattttg  | gtacttacaa  |
| 17401 | tatcttgcta  | atgtgtttgt  | ttatgcagtc  | gaagtcatac  | cctgtatagc  | gggatcaaaa  |
| 17461 | tgtacaaaacg | atatgacata  | caacgaactt  | tgtagattta  | aaggattcag  | caaaggaggg  |
| 17521 | ttttgtcaaa  | aatatgttca  | ccaaacgatac | ggtcgggtgtt | gctgccatcc  | tacagggttg  |
| 17581 | gaatctcaag  | agtcttccat  | atccgggtgat | accaatgtag  | tcattactaa  | ttaattcctc  |
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| 17701 | ttcatacaac  | aaaattccga  | caagcacttc  | attttatagt  | tgtgattaga  | ttaagtatat  |
| 17761 | tgttattata  | aattcaatta  | attatttaca  | aaaataatat  | ttctctagaa  | ttaattcaaa  |
| 17821 | atatgttttt  | gtaatcggt   | ttaattatat  | ttataagtaa  | tcacattata  | ttttatttta  |
| 17881 | tcactctaatt | atatctagtg  | gaattatgta  | ttaataattt  | gatattctca  | aaaagtattt  |
| 17941 | atgtaaaattt | tatttacagt  | tattagaatt  | cagcatcaaa  | tatgtacta   | tattttggct  |
| 18001 | actggaaagc  | ttttaatttg  | aaaaaaagaa  | gaagagagtt  | tatatattat  | aatttataaa  |
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| 18121 | gactcatcaa  | tgtgccctag  | ctagtacacc  | ttttttacat  | cacaactata  | aaactatgct  |
| 18181 | cgacaaagct  | tgagtcacat  | tatacagctg  | caatctattt  | tcaagatatg  | aaggcttggt  |
| 18241 | ttcgatatatg | aaaccaggag  | gtttccattt  | gcagagaaca  | tccaactcca  | gagagcaaaa  |
| 18301 | tctagacaag  | ccatagtaaa  | cttcgtttgg  | tttcttgaac  | atgttaagtt  | ttgcggtagt  |
| 18361 | aagctttaag  | ttaggcttct  | gctgtacttt  | tgtccattta  | gctttaacga  | tgaacaactc  |
| 18421 | aaagaaaatt  | gatggcgatc  | aatagtaaat  | gactgtaaac  | attggaaatt  | gaagaagacg  |
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| 18541 | taactatgag  | aaacttttgt  | tctttaaaga  | cttcattgtg  | cagtccactt  | cttatacaag  |
| 18601 | taaccaccca  | ctaggagctg  | gacattgaaa  | ctggatgatt  | ttccgtagt   | ttccatcatc  |
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| 18781 | tcttttatcg  | ttcctcgaaa  | ccctttaatc  | tctaacactt  | ttactggaca  | agatgtgagt  |
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| 19021 | tggacagttc  | cttagaagaa  | ctggcattgc  | ttgccatcct  | cgactcttgt  | gactcttaag  |
| 19081 | agttaacgat  | ttgagattgt  | tgaacactgg  | catcgattca  | caacacagag  | aaagaacctg  |
| 19141 | aaaacaagac  | aaaacactat  | tagacttttt  | gccattacat  | gtctcaaaac  | atgactttta  |
| 19201 | cgctaactga  | cctcgagagt  | attcggagac  | aagtacatat  | actgaacatt  | acgtatgcct  |
| 19261 | tttatgagct  | tctccatatt  | aactagtcgg  | agaacaacat  | catcctccac  | ccaatcgata  |
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| 19501 | aggattttga  | ggcttgcat   | tgatacgttg  | acatccttac  | ctccccagtt  | aacactaacc  |
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| 27061 | gatggctctt  | gctcttatcc  | ttctcccat   | gatttctggt  | aatacatatt  | tttcatcttc |
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| 30001 | gcaatagcat  | tcaataaata  | taatatggag  | ggttggcaat  | ttggttcctt  | gtctgaaata |
| 30061 | tgcgtagtac  | aaatttcttt  | ctaacaaaag  | agaaaagatat | gggttcagtat | ctgttgatga |
| 30121 | accccataat  | ctaactatgt  | caagccttct  | tcacatagcc  | aattgccagt  | tccatcaagg |
| 30181 | attcaagacc  | tatggttgta  | acatcctagt  | caatttgtcc  | aaatagtgt   | acatagagct |
| 30241 | ccactatcga  | aaattcgaaa  | tttaccaaaag | tcagcttcat  | tcaatacgtt  | gatatttggg |
| 30301 | atgtacttaa  | gttaactaca  | ttcaaagcta  | aacgctttgc  | tgtggtaaac  | tctgccaaat |
| 30361 | ttcgtgaagg  | aaagaacatg  | cgaatatatgt | tttataatga  | aaaagtggcc  | tttgaagcaa |
| 30421 | ccaacctgat  | cgctattatg  | tcagcaaaaag | gatcatcaac  | tatgaaccca  | gccaccttcc |
| 30481 | aggagggatc  | cttggcatgg  | actcgggttac | aaagagctct  | catccatctg  | tatgcattct |
| 30541 | cactagaaaa  | ccgcggtgca  | attatccaag  | caactggaat  | agccttattc  | tcagagtcca |

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| 34261 | caaaatggtc  | aaattcaacc  | agtcacccaa  | tcatcaacaa  | caaaaaacaa | tttccacata  |
| 34321 | attatgaagg  | acacatacat  | aacataacaa  | gaaagaacaa  | agccacatac | ataatctaac  |
| 34381 | atttgataaa  | ccactttcca  | cataatcatg  | aagaacgcaa  | cagataacaa | aatatatattg |
| 34441 | tttttgagag  | tttagcacat  | ctacttgaaa  | aaaaaactat  | atcaaaatga | acaaagtggga |
| 34501 | gattatatat  | ctgagatggt  | tgttttgatt  | gaattacaac  | atagaaataa | aactatagag  |
| 34561 | aaaactgttt  | atttcaaaac  | atatttttga  | attttgtaat  | aaaataaaaa | ctgtctccaa  |
| 34621 | aataataata  | gaatttttat  | gtctttgatc  | ttgtacatta  | acaagtgatc | taaacatcaa  |
| 34681 | aagctaaata  | tgacattttt  | cctaaatata  | aaccattact  | taatacattt | ataacggaag  |
| 34741 | aatacgagta  | agggctcgaga | atagtttoga  | aagctaaata  | tgctatccgg | aagattttca  |
| 34801 | tcaaaatata  | ttgattaata  | aaaagagtaa  | gactacaata  | aaataaatag | taacacattt  |
| 34861 | cagcggatgt  | taccaatata  | gtcggtaata  | agatttgggg  | gaaggctaca | tattgttttg  |
| 34921 | acatttacga  | cacgaaaaaa  | atgcttattc  | aatttaaatc  | ctgtacactt | acattttacag |
| 34981 | tcaaattact  | tgtgtagaca  | gagacgcaag  | tgtttacaac  | aaagctactt | acgctttttc  |
| 35041 | agtccaatgt  | ttcattactt  | actcaccat   | actcttacc   | aaaaccacag | ttcgtactct  |
| 35101 | cgttgatgta  | acctgaaaat  | acaaatgcgt  | aatttttctg  | cgttagaaat | tggcataaat  |
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| 35221 | aaaataaacg  | tttaacagat  | actgcataatg | cagggttcatt | taacaagaat | ttgtcgacaa  |
| 35281 | tgtctagcta  | aacaacccaa  | ttgttgccaa  | acatcatgca  | catatcgaga | aagctaacat  |
| 35341 | gtgaatcaca  | aaatagtaaa  | ggaatcataa  | ttaatgagta  | ggtttaagga | tgtattaccg  |
| 35401 | tccaaatagt  | ttataagggtc | agctgctoga  | tattctttgt  | attacgtaac | atcatactcc  |
| 35461 | cgtttctttt  | ctcctcttgc  | tcttcgtatg  | ggttacctct  | ataagtcgaa | cttgccctct  |
| 35521 | cattatctga  | agaccctggc  | ctttctgtta  | ggaactgttc  | ccagaatata | tcattcactc  |
| 35581 | ttgctggagg  | agctgcattt  | gcttggctac  | ctccaactgc  | aatctcttgt | ctaccccgat  |
| 35641 | ttttctcact  | tgcaacttgt  | tctattgagt  | taaagtttaa  | ctcctgactt | ttaagagtcg  |
| 35701 | tcttagctat  | ctgtgaagct  | gttttgcctg  | gtaacggagc  | agaagccagg | gttagattta  |
| 35761 | aatgacatga  | aaagctacca  | tcagtctcct  | ctgaagaagt  | tagcctctgc | tgcaaggctc  |
| 35821 | ccacccttgt  | attatcattt  | aacagtaatc  | tcctcgggca  | tgtcccggtg | tccgcaagct  |
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| 35941 | ctcctgacag  | tatccctttg  | ggactcgcac  | cttcttcatt  | ggaactttgt | atactgtgtg  |
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| 36061 | tttgatgaaa  | aatgtttcca  | gactcgcgtc  | tcgagctacc  | actactatta | tccagatgag  |
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| 36241 | tcgcagtttc  | caaaaaattc  | agcagcttct  | tctgcctatt  | ctccatatca | tcaacatgct  |
| 36301 | cagtcatttc  | ttcaaactga  | tgctttgcta  | caaccttctg  | ttgtttgaac | tttaaaagct  |
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| 36601 | atagaaacct  | aaagcagaga  | acgaggaaaa  | acaacacagt  | ctctaagttc | accattttcc  |
| 36661 | acaattcagt  | ccataatcac  | acagagacta  | caatttttag  | ctacatttca | tcttctcgtt  |
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| 36781 | agacctagat  | gcgttctaac  | atttccaaaa  | ccctttttac  | attggaaact | tgatcaaaat  |
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| 36901 | ttgagctgac  | gaatgaagga  | agagaagtta  | ttgtgttga   | agtaggttg  | aagaaggagg  |
| 36961 | cgtgaaaatt  | cggcatgatt  | ccaaacgatg  | aagctgttgt  | tgtagcgct  | ccacgatagc  |
| 37021 | atctgggtccg | ttgatgaatc  | gtcgaccatc  | tcgtagggtt  | tcaccaagaa | aggcgctggt  |
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| 37201 | tgccgtaaat  | aaatgaataa  | ctttcttttc  | attttttata  | ctaataatat | ctaaaactgc  |
| 37261 | aaattaaacc  | caaaaaatc   | ctaaattggt  | tagctaaaac  | tgcaaatggc | caagtataaa  |
| 37321 | tgataaat    | cataaaaatg  | actcttttga  | gtgttactta  | tagtcttata | gaccatagta  |
| 37381 | ttcaacaaat  | attgtttacga | attgttttga  | gtataaatc   | tgtgatacta | atttctatcc  |
| 37441 | actgtctttt  | gtttggatat  | ctcacaattg  | aaagatatca  | gacaaataga | gctagtgaag  |
| 37501 | tttaatatag  | tgaaatcttt  | tgagtggagt  | tatctatatt  | tttctgttat | tttaaatcgt  |
| 37561 | gttattctat  | ccaattgtaa  | aacttcta    | ttttcatttt  | tgtcatttgt | gtgagatctt  |
| 37621 | aaaaccaatt  | tttagccttt  | aaaccagttt  | aaaacattat  | aataattatt | aattttgaca  |
| 37681 | ttattatttg  | ataatttata  | aagatttcac  | gataaaatag  | ataatgtttg | tcaaactaat  |
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|-------|-------------|-------------|-------------|-------------|-------------|------------|
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| 41461 | agcacaaaac  | aataaagatt  | tgtacccatt  | taatgtagtt  | ttttcctagc  | aaaagtgc   |
| 41521 | ttctttttcc  | ccttttgtgt  | gtacaaaagc  | tttagatata  | atcaattgag  | ctcttattaa |
| 41581 | tcacaatcaa  | atatgtgaaa  | tggatatttaa | cttttgctct  | ccaattaaaa  | tttttcgcta |
| 41641 | tttctgtatt  | tttctctata  | caaataaatc  | cactaaaaca  | aatttgtaaa  | atcttaaaac |
| 41701 | taaaatcatc  | atacttaaat  | tatacttcct  | ccgtttcaat  | taattatcgt  | tttataaatt |
| 41761 | aattcttttt  | aaattagttg  | ttgttttatg  | tttttaaatg  | atgtttttta  | acagattttt |
| 41821 | caattttatc  | cttattat    | tagctgatta  | attgatgata  | tcaaatttaa  | taatacatta |
| 41881 | attagagata  | aaacagaaaa  | attatatatt  | tttttaattt  | atgtaaaaat  | attaaacatc |
| 41941 | aactaatcta  | aaacagagag  | aatacaacat  | ttatttttagt | aattatagta  | taatctaaca |
| 42001 | tttatattca  | atttaaatta  | ccattaatag  | agtactataa  | ttaggtggag  | ccgagagtaa |
| 42061 | agagaaggtc  | tttattgact  | gacccatgtg  | aaactgaatc  | tcccctaatt  | taatttgccg |
| 42121 | acaacgtaaa  | cgcttcactt  | tgagtatctc  | gaacacatcc  | atgtgtcact  | ctaactctct |
| 42181 | cactcttctt  | ctccccaatt  | tcattggtcac | actaatcttc  | ctttaacttc  | tcaacaaaca |
| 42241 | aatcttcccc  | ttttttat    | tttgatcctt  | ctctctcctt  | tttttgatgc  | gacccaagaa |
| 42301 | ttattctcag  | atggagaaac  | ccatctccat  | cacgacgggg  | aagtttcgga  | ccaacaacaa |
| 42361 | caacaatcat  | aacaatgtct  | ggttcgttgt  | tccactcttc  | tttatcctct  | gtttcgttct |
| 42421 | cctctgtttc  | gactactctg  | ctctcttcac  | cgacacagac  | gaaaccgctt  | tctcaattcc |
| 42481 | cgacgttacc  | cagaaatcaa  | catcctctga  | attcacgaaa  | gatgacaact  | tttctcgatt |
| 42541 | tcccgacgac  | ccatctcctg  | attcttctctg | ctccggtcgg  | tatattttacg | ttcatgaact |
| 42601 | tccgtataga  | ttcaatggtg  | atttgcttga  | taattgcttt  | aagattacta  | gaggaaccga |
| 42661 | gaaagatatt  | tgctcttaca  | tcgaaaacta  | tgggttttgt  | cctgtcatta  | agaattacga |
| 42721 | gaatgtgttg  | ttgaaacaaa  | gttggtttac  | gaccaatcag  | ttcatgctcg  | aggtgatatt |
| 42781 | ccacaacaag  | atgataaatt  | acagatgttt  | gactaatgat  | tcgtcactag  | cgtctgcggt |
| 42841 | tttcgtgccg  | ttttacgcag  | gtcttgatat  | gagtaggtat  | ctttgggggt  | tcaacattac |
| 42901 | ggttagagat  | tcttcgtctc  | atgagctgat  | ggattggcct  | gtggtacaga  | aagagtgggg |
| 42961 | tcgaatgtct  | ggttagagacc | atttcttggt  | ttcaggaagg  | attgcttggg  | atttcaggag |
| 43021 | acagactgat  | aacgaatctg  | attggggaag  | caagcttcgg  | ttcttaccgg  | agtcgaggaa |
| 43081 | catgtcgatg  | ttgtccatcg  | aatcgagttc  | ttggaagaat  | gattacgcta  | ttccgtatcc |
| 43141 | gacttgtttc  | catccaagat  | cagtggatga  | gattgtggag  | tggcaggagc  | taatgaggtc |
| 43201 | tcgaaaacgc  | gagtatctat  | tcacctttgc  | gggtgtcca   | aggcctgaat  | ataaagactc |
| 43261 | ggttcgaggg  | aagattatag  | atgagtgttt  | ggagtcaaag  | aagcaatgtt  | acttgctaga |
| 43321 | ctgtaactat  | gggaatgtga  | attgtgacaa  | ccctgtcaat  | gtgatgaagg  | ttttcaggaa |
| 43381 | ctcgggtgtt  | tgtcttcagc  | caccgggtga  | ttcttacact  | agaaggtcac  | tgtttgatct |
| 43441 | aatattggca  | ggctgcattc  | cgggtgttct  | ccatccaggg  | acagcgtacg  | ctcaatacaa |
| 43501 | gtggcatttg  | cccaagaatc  | actcgagtta  | ctcggtttat  | ctaccggtta  | aggatgtgaa |
| 43561 | ggagtggaat  | atcaaaatca  | aggagaggtt  | gattgagatt  | ccagaggaaa  | gagtggtgag |
| 43621 | gttgagagaa  | gaggttataa  | ggttgatacc  | gaaggttgtc  | tacgtgatc   | cgaagtacgg |
| 43681 | atcggatggg  | agtgaagatg  | catttgagtt  | ggctgtgaag  | ggaatgttgg  | agaggattga |
| 43741 | agaagtggaga | gagatgatga  | gacaagggaa  | agatggtagt  | gatgggtttg  | atgatagaga |
| 43801 | tgattataag  | tatacttttt  | ctccatatga  | agaacctcaa  | gttttggtt   | aaagtggaaa |
| 43861 | atatgtcatt  | atagtggcct  | ttttttttta  | tatagtttat  | ataggtagaa  | gcaatttagt |
| 43921 | gggaaaaaag  | aagaagaaaa  | aaagctat    | tgatataaaa  | gaaaaaacaa  | aaagatgcta |
| 43981 | tatgaatcct  | tcttcaaccg  | ttttgggttaa | gtacttaagt  | tcattattac  | ttgagcatct |
| 44041 | agtctggtcc  | accggatttg  | gtttgagtgt  | agtttagaaa  | tgagttaaaa  | ttatgtaaat |
| 44101 | ttaatttagg  | atttgaatgg  | ttgcgatgga  | gcaatgtgca  | tggctcaaa   | aagtaatat  |
| 44161 | tcgggggttg  | tggagggaca  | aggaagtctt  | tgtctatgat  | agagaaagac  | ggtaagatag |
| 44221 | tctattcgat  | gatgtatata  | aagcaacggt  | tgcattgtac  | atcctctaca  | atgataatat |
| 44281 | aaccacata   | ctaagaccgc  | ataaatttat  | cttctttgta  | ggtgctcttg  | cttcaacatt |
| 44341 | ggtgtctgat  | gtcacagatg  | gttctcccaa  | gttcagagag  | gtatggcaac  | tttctacaa  |
| 44401 | gtgaatcaaa  | gttctgctgg  | gattcaatag  | cgtccattc   | tgatccaacg  | attcatcgag |
| 44461 | tttagtggat  | ttgtgttgct  | cttcaaaatg  | actagaaact  | caaaatctca  | tttatgtttt |
| 44521 | agtttataaa  | gtctgttgac  | tgaataatta  | ttgcttagtt  | ttgttctttg  | atacattctc |
| 44581 | tgacttataa  | aaggcttatg  | tgatctgctc  | gtctattttc  | accggaccac  | agtaccaact |
| 44641 | tatgcttact  | tggtaaatga  | gtcggatgat  | tgtgtttggc  | caaataagat  | aagttggttt |
| 44701 | attttttaac  | ttcctccctt  | aaagtaattg  | gctttaactt  | gattatatta  | tccctcta   |
| 44761 | tttctttata  | ccaaataaat  | attctcaatg  | ttagaactcc  | aatattgaaa  | ttggaatgtc |
| 44821 | ctcttagtta  | aacaaataat  | aacttgggag  | ttcttcatct  | taaaattgga  | atgtcgtttt |
| 44881 | agttaaacac  | agaataacgt  | ggggaaagaa  | aaagaagaaa  | aacaaagaat  | aacttagatg |
| 44941 | tatgtataca  | tattctta    | ctaattgtact | ttgctacttt  | cattaccaga  | caaagaaatg |

|       |             |             |             |             |             |            |
|-------|-------------|-------------|-------------|-------------|-------------|------------|
| 45001 | gtaacagaat  | ataatagatg  | atagttcagt  | tacaagaatt  | tattcctttg  | gggcttatca |
| 45061 | tcaatattag  | gacaagcata  | attctatgag  | taaccttttc  | attgtaaaca  | aagaataact |
| 45121 | taaaatataa  | tcattatgtg  | ctatctatat  | ataacccaaa  | gctctcatca  | tcattatgtg |
| 45181 | aaaccaagac  | atcataaaat  | tattgaaaat  | actaaaagta  | agagcatagt  | tatgtcaact |
| 45241 | tatgataaac  | tcagaagata  | ctattttactg | tatcaaacgc  | gcggattaaa  | atgtgacggt |
| 45301 | tgcaatcttg  | gtcgtgacta  | ctatagtatt  | ggtcacgcgt  | gttttcggtc  | tggactcttc |
| 45361 | ttccacaacg  | agtgcgcga   | atccagtgta  | gagattcaca  | acctctatca  | tccacaacat |
| 45421 | tctctccaca  | tcaaagtact  | taaacaaaat  | gaagatgtcc  | atggagaatg  | caagctatgt |
| 45481 | agaggtaact  | tggaacaaat  | atattaccaa  | tgttcaacat  | gtgattttgc  | catcgattta |
| 45541 | atatgtgcaa  | gaaaaaaagt  | tgtggcaaca  | attgaggttc  | caaagacca   | tgaccacctt |
| 45601 | ttatccctta  | ttccaaagat  | gattacgttt  | acttgtcatt  | tatgtggatt  | gcttgatgat |
| 45661 | cggtttccct  | atgcatgcaa  | tttatgtgat  | attacttttc  | acaaagattg  | cgccgaatcc |
| 45721 | acaccagaga  | tcaactactc  | ttgtcatcct  | caacaccttc  | tcaagcgtct  | cacgcatggt |
| 45781 | ccaagttata  | ctgatggaaa  | atgttgtttg  | tgtggaagca  | aacttcataa  | cttgttttat |
| 45841 | cactgtttcta | tttgcaattt  | tagcgtggat  | gtcaactgtg  | aaaaaaatcc  | acctcttttc |
| 45901 | actctttttc  | accctaaagc  | tcatgagcat  | aagctcactc  | ttatgccgca  | acgaagtttt |
| 45961 | gtatgcagcg  | cttgtggaat  | ggatgacgat  | ccaaatcctt  | acgtatgtcc  | tcagtgtaat |
| 46021 | ttcatgatcc  | acagaagttg  | tattgatata  | ccacgcgtta  | ttaagatcta  | tcgtcatgat |
| 46081 | caccatattt  | gttacaataa  | ctttcttgac  | gctggagatt  | ggaaatgtgg  | aatatgtcat |
| 46141 | aaaaagataa  | actggacatg  | tggggcttat  | tcttgttcgg  | aatgtccaga  | tcttgtcatg |
| 46201 | cacttgagat  | gtgccacaag  | attcgggata  | tggaaatgga  | ttgaacttga  | aggcatatca |
| 46261 | aaaaatactc  | taaaagtcaa  | atcatacgag  | gagatcgaag  | aaggggtaat  | aaagcatttt |
| 46321 | agtcacgacc  | atactttaaa  | gtttaaaagaa | gggagtgatg  | gtaacggtga  | atgcatacag |
| 46381 | tgcaaatat   | gcacttatcc  | catattttct  | aatccatttt  | atagttgcat  | ggagtgtgat |
| 46441 | gatttcaccc  | ttcataaaaa  | atgtgtggat  | ctcccaaaaa  | agaaaaataga | ttctttctac |
| 46501 | aagatgtcga  | cctcgctaata | cacaaattat  | cagggtaatg  | cagaaaacat  | ttgcaatgct |
| 46561 | tgtcaaaaaca | tctatcaagg  | tttttcttac  | ttaagtgtatg | atggaaacac  | tttattggat |
| 46621 | gtgcgatgtg  | gttctatttc  | cgagcctttt  | ttccatgaaa  | gtcatcctca  | ttcgttatac |
| 46681 | gtcagctact  | taacaggcgg  | ccgattttgt  | aatgcttgta  | gagaaaaagc  | aacaatgggt |
| 46741 | ttgagttgtg  | aggaatgtga  | atttgtttta  | gacattaaat  | gctctactct  | gccaaacatt |
| 46801 | gttaaacacg  | aaaatgataa  | agatcatttg  | ttgtctctat  | gttatggaga  | aaacaaatgt |
| 46861 | gagcaatgct  | ggtgcgagat  | gtgtgaggag  | acaataaata  | caaagaaatg  | gttttattca |
| 46921 | tgtgatcatt  | gtggcattgc  | ttttcacatc  | agatgcacac  | ttggagactt  | catatggttt |
| 46981 | aaaccggaaa  | aaaaatctga  | atcatccacc  | aattgtgtga  | ttcttaataa  | tcgtgcaagt |
| 47041 | cggccatttt  | gttattcttg  | taattctcgc  | tgtaaatacc  | catccatctt  | gtttttctat |
| 47101 | gggaaaacat  | tgtgttcttt  | gcaatgtttc  | caacaaaaag  | tttatgcaat  | cctggcataa |
| 47161 | atcttattta  | ttttctcaaa  | tattttatga  | taaaaaacia  | attagattat  | gtgttgcatg |
| 47221 | ttaatactat  | atatatttta  | agcatcaagt  | atattaaaaa  | aaaatttatg  | tgcaatttgg |
| 47281 | aattcaattc  | gatttagggt  | ggatttcttt  | ttatttcttt  | gttatacttt  | tggtttagaa |
| 47341 | ataatagtat  | tcaaaacaaa  | atataatata  | ctttaagttt  | cgatatgtat  | tcaaatctaa |
| 47401 | tcaataacta  | aattttatac  | cacgtcgtgc  | acatgatgat  | tttcttttga  | aacaatttgt |
| 47461 | gaattttgat  | aagggtttat  | tggtaacgag  | tgtttacttg  | ttgctgtaag  | aacttttttt |
| 47521 | ttgttttttc  | cacaaaagtt  | ggattttatt  | gaactgaacc  | aatcaatatg  | ggctaataa  |
| 47581 | aacaaaagcc  | gtataactat  | aattttacaa  | gaattaatta  | aagcccaaca  | tgagccataa |
| 47641 | cataacccta  | atgaagagga  | aaatacaaaa  | agcctccatc  | actaacacgt  | gtttcaatta |
| 47701 | gaacaaacag  | agagcttcca  | tcacagaccg  | actttaacct  | tgccgttcac  | caccgattcc |
| 47761 | ggtgacaaga  | gtcatcgtcg  | atatttaatt  | gttcagtaaa  | ttttgtgggt  | tttcaccgtt |
| 47821 | taacaaaatc  | ggagcccata  | agaggataac  | agctaaaggg  | aattgatagt  | atgcttcagt |
| 47881 | tcttctactt  | cttctcttta  | attaaaattg  | caaactactg  | ggataattaa  | aaaacctttc |
| 47941 | ccaatttaaa  | aaccaaacac  | tcaaaagata  | aatcagtgaa  | aacaattgat  | tagtgaaatt |
| 48001 | tactaaattg  | caatcaccaa  | tgagaaatcc  | catgaaatta  | tttaaagcaa  | acaaatatgg |
| 48061 | aagccgacta  | aaagatgtta  | acgaaaccat  | ctatgtcagt  | tgataagctg  | gacatcactg |
| 48121 | cgtgggaagc  | caatagattc  | cagacggaag  | ccgaccaaag  | atgttaaaga  | aaccatccat |
| 48181 | gtcagaagag  | aagccggaag  | tcacggctga  | ggaagccagt  | tgattccgga  | cggaagccaa |
| 48241 | ctatcttggc  | taacagagtc  | ataagatgct  | ggataaaaagc | ccgagtcata  | cgagacggcg |
| 48301 | atttactgaa  | aaattcagtc  | ggtagaaaca  | gagttcatct  | ctgtaaaaaga | tatgtaggaa |
| 48361 | aaaagagaga  | actttttgtt  | ttgctgtaaa  | gaactttgga  | tgcaaattgtt | tttactattt |
| 48421 | gtgaaactat  | tattttatat  | ttatagccaa  | atttaatttt  | ttaactaaac  | aaaaattatg |
| 48481 | ccgtccatat  | agtatcctgt  | aaattaagtt  | ttagattatt  | aattttgtta  | attattgata |
| 48541 | aaaaaaactc  | aaataatgtc  | atattttctc  | ttaattcaaa  | agttaattgt  | gtataatttg |

|       |             |             |             |             |              |             |
|-------|-------------|-------------|-------------|-------------|--------------|-------------|
| 48601 | attggttccc  | ccaaaagaaa  | aattgattgg  | tttagtgaac  | cgataaatcc   | aatctcgtac  |
| 48661 | cgaccgggttc | aatgggtttt  | gtatttgctc  | ctctgtgctc  | tggcctctac   | actttggata  |
| 48721 | gctgccgccg  | aagttttgtg  | caatggcgac  | gaaaccgacg  | tttcagctgt   | tttcttcttc  |
| 48781 | tcaaggttct  | ggtctagggt  | tagggttcct  | tgattcatca  | gagccagctc   | ttcctccacc  |
| 48841 | tcctctcctc  | gttgaagtat  | tatccttcga  | ggtatcgtca  | ctactacttc   | ctctgcaact  |
| 48901 | ccatcttcaa  | tttcttatgt  | aagtttccct  | ctttttgatt  | tctgggtgatt  | tcgtcgcagt  |
| 48961 | aggtgtcttc  | ctccactgat  | ttcgaagtgg  | ataaattgac  | tatcggcgag   | atcactcttt  |
| 49021 | tgaaggtatg  | tttctgtcga  | gaaaattcac  | caaactttga  | gaaagtaatg   | gagaaattga  |
| 49081 | gttttggttag | tttctgggtt  | ggttataggg  | tcgtgtgagc  | actaaagagg   | tttttggtt   |
| 49141 | gcctaattca  | gatttggttc  | ctggagtcta  | tgaaggtgaa  | tgatttggtc   | tagttgtagt  |
| 49201 | ttatgtgatg  | tgtatcccc   | tgcattaagc  | agttttgtaa  | ctcttgaatt   | cgattgaatc  |
| 49261 | taggcgggct  | taagctttgg  | gaaggatcga  | ttgatcttgt  | taaagctctt   | gagaaagaat  |
| 49321 | cacaaaccgg  | aaacttatca  | ttttccggaa  | agcgggttct  | cgaggtaggc   | tcttttgcct  |
| 49381 | taggtgtcaa  | acaatgatgg  | atacaacgtg  | ttcttcacat  | cactaacata   | agatattgaa  |
| 49441 | tctatatact  | cagcttggat  | gtggtcatgc  | acttccagga  | atctatgcgt   | gtctcaaggt  |
| 49501 | aagttgatgc  | tgtctaagct  | ttattatact  | ctgtggctaa  | gtcacatctt   | cttagatatt  |
| 49561 | atggttccct  | ttggtgttta  | gggttcagat  | gctgttcatt  | tccaggactt   | caatgctgag  |
| 49621 | gttcttcgat  | gtctcaccat  | tccgaatctg  | aatgctaate  | tgtctgagaa   | gtcttctctt  |
| 49681 | gtctcagtaa  | gtgaaacaga  | agtacgcttc  | tttgctgggtg | agtggagtga   | agttcatcag  |
| 49741 | gttcttccac  | tagttaatag  | tgatggtgag  | actaataaga  | aggggtgggtta | tgacatcatt  |
| 49801 | ctaattggctg | agacgatata  | ttccatctcc  | gctcagaaaa  | gtcaatatga   | attgattaaa  |
| 49861 | agggtagact  | ctcgttttct  | cctagatagc  | agaaactttt  | acgatcattc   | ttaaagattc  |
| 49921 | attggagggtt | caacacttgg  | ttctttgcag  | tgtctggcgt  | atcctgatgg   | agcagtgtat  |
| 49981 | atggctgcaa  | agaagtacta  | tttcgggggtc | ggtggaggga  | caaggcaatt   | cttgtctatg  |
| 50041 | atagagaaa   | acggtaagat  | ggtctattcg  | atgatgtata  | taaagcaaca   | gttgcatgtg  |
| 50101 | tcattctcta  | caatgataat  | ataacctcca  | accgcataaa  | tttatcttca   | ttgtagggtgc |
| 50161 | tcttgcttca  | acgttggtgt  | ctcaagtcac  | agatggttcc  | tcaaatgtca   | gagaggtagt  |
| 50221 | gaagctttcg  | tacaagtaag  | tcgaagctat  | actggaattc  | agtgtccaac   | gatctgattt  |
| 50281 | tagtggattt  | gggttgctca  | taaaaatgag  | tggaatttca  | aaatctctca   | tccatgtgtt  |
| 50341 | tagcttatag  | actctoctga  | ctgtgttata  | ataattgctt  | agtttttcat   | tttggtagat  |
| 50401 | tttctggcct  | aacgaaaggc  | ttatgtgatc  | tgccgttgat  | tctcacggga   | ccaaagttcc  |
| 50461 | aaactaagct  | ttagttggag  | tcgcagttta  | tatattgtaa  | atctctcaca   | ttagatgtta  |
| 50521 | tgccttttgag | aataaatcca  | ccagctcgac  | ctgtcttgta  | aaaagggtgt   | cctattttaag |
| 50581 | tcaataccat  | agttgccttt  | taatcagtta  | gtgcagccca  | tactaggctt   | acatggtaat  |
| 50641 | gatttgatga  | ttatgttttg  | gtctccaatt  | aatttgagat  | aagaggcgta   | gcagttggcc  |
| 50701 | tcgacagggt  | caaaaagtca  | aaaatttccg  | acattagaag  | gtatatcttt   | ttctttttta  |
| 50761 | aatctagcaa  | atgaaacccc  | aaactcaaag  | agtgtacaga  | tattcaaaag   | agattatact  |
| 50821 | tgaaaccaaa  | acaattcaaa  | ttcaccaaca  | aaataaagaa  | cataggtgtt   | ttacaacata  |
| 50881 | aagattcatg  | atggtgaatg  | gtcaagagtc  | acggccgcac  | cggtaatgct   | tagagcagcc  |
| 50941 | tctactataa  | gggttagacg  | gtggagggaag | acattgagtt  | gagtaagact   | cgctcgttt   |
| 51001 | accaccatcg  | caagcaggct  | gattcctcct  | caaagctcca  | tacgaaagct   | tatgtgcctg  |
| 51061 | ctcctccgtc  | aacctctggc  | ttgaccaaga  | ctccattatc  | acactcattt   | cctctgtctc  |
| 51121 | caccatgctg  | ctgcactccg  | ccacagatcc  | attgcacaga  | gatgatgatg   | atgccttgga  |
| 51181 | ggtgacgtgt  | gctagtagaa  | ggcagagaaa  | gaagatgggtg | atggtggaga   | atatcctaga  |
| 51241 | gggtttttatc | tccattttgt  | aagtgtctta  | aagagagaag  | aagagagtga   | attgtgaaga  |
| 51301 | cgaatctttg  | gttatataat  | aataaataag  | catggaatgc  | cacattgaga   | cgatttcctc  |
| 51361 | attgtaaaga  | caaagcttag  | tgggagcagc  | actagaaggg  | accgcacttc   | acctaacaca  |
| 51421 | ctgctttact  | taatagagta  | cgtgtgtata  | tttatgtccg  | accactctat   | gttaatgtaa  |
| 51481 | aactacttat  | acacctcggt  | ttttgttttc  | ctataattat  | gttttggtag   | aaagtttgaa  |
| 51541 | tccggattct  | tattggatta  | ctttttatca  | gtagagccaa  | aacaaaaggt   | acttatgagt  |
| 51601 | tctgacaatg  | tatattacca  | cgtttaatgt  | aatttaataa  | tatggtcaat   | tgttttcgtg  |
| 51661 | agagggtatt  | tcttattttat | tgagattttc  | ttattgcaaa  | cttggttatct  | aacatgactt  |
| 51721 | tagaatctaa  | atctaaatgt  | aagttaaagg  | aattatacat  | atttaaataa   | atggactcaa  |
| 51781 | ctctacatta  | cttctcaaaa  | tatctacgtt  | gttgcttata  | taagttacat   | gttaattttg  |
| 51841 | ctttccaaat  | caattcatga  | ttaatgagaa  | aatggagacg  | gatacaaacg   | cccatagttg  |
| 51901 | ttgatgcatg  | caacgtataa  | catagcgtaa  | aactaccgct  | gttaattatg   | cttggtgaat  |
| 51961 | ttcgcatctc  | ctggttggtc  | cttctcgtgt  | aggttaggtc  | gattaggctg   | gaatattatt  |
| 52021 | atcaagggtt  | cttattattt  | atttttaaaa  | atttcatttt  | tgataaaggg   | tcttcaaat   |
| 52081 | aaaatgcaaa  | tgtcaagtta  | caggaccaca  | acctttttgg  | gtcatgcagt   | ttagatgata  |
| 52141 | gtttagagat  | taattagtgt  | tacacgtacc  | taaccgagaa  | atagaataac   | aacataagga  |

|       |             |             |             |             |             |             |
|-------|-------------|-------------|-------------|-------------|-------------|-------------|
| 52201 | tgatatatga  | agtaaagatt  | atccataaca  | attactgaag  | agggacttgt  | ataaatctaa  |
| 52261 | gtgtttgcaa  | gttattttcta | agatgatcag  | atgatccaca  | acttgtatgc  | ttgtaaaaga  |
| 52321 | ggaatttttg  | aggtaaaaaag | tcattcatct  | gaaacaactc  | gttttttctt  | cttcttgttt  |
| 52381 | acggtttttta | gtttttctctc | tttgtttttg  | cccgaattca  | caacaacaac  | atttcgtaat  |
| 52441 | ggcggatgat  | ggtaactaat  | ttaaaaataa  | atagttagat  | aaatgatttt  | actgagacct  |
| 52501 | cataaattga  | tataatttca  | tttgttttat  | tgttatatct  | taaccaaaaga | attccatgaa  |
| 52561 | taaatccaga  | caaatttctc  | aagatccata  | aattttttgt  | gaaggttcga  | actccgcaac  |
| 52621 | aataaaaagaa | aaaaaaatca  | gagtagtgaa  | tctttcaacc  | attaaatcac  | caccagttga  |
| 52681 | ttatagtttt  | atttattttg  | gtcattacaa  | aatgatagaa  | tattaaatgt  | gattacgtca  |
| 52741 | aaattttgat  | tagtaaaatt  | ttgtggaatc  | aaaaaaatta  | cgaaatagt   | tagaacgaaa  |
| 52801 | acgtagattt  | ctattgatga  | cgtagttgtt  | accctcaaat  | tcggatcaag  | taaccaaaata |
| 52861 | gctagaacaa  | aaacgttttag | taagaatata  | gatcatggtt  | ttctataaaa  | ttatgatttg  |
| 52921 | taaacttttca | caaaaaaaaaa | ttttaaaaaca | ttttcgtaat  | tttgcagcat  | attaatcgga  |
| 52981 | gccaaagataa | cttatgtcgt  | gtgttggtac  | gacaataatt  | aatctgaaaa  | tcagactaac  |
| 53041 | tgaccagatt  | actaaaaataa | acaataactcg | atgatcatca  | tggtcagttc  | cataattttt  |
| 53101 | tgtttctcta  | attagtccta  | gatatatata  | agaataggaa  | ttgcaagcac  | atagataaca  |
| 53161 | cacgttgcat  | ggagtataca  | tactcaacaa  | acttattata  | caatataggg  | ttattacaat  |
| 53221 | taatttaattc | gaaattattt  | tatcagcaga  | gagttttcac  | ttcaacctct  | gcatctgtag  |
| 53281 | tacttggggt  | ggccacgggt  | gtacttggtc  | gacggatgag  | gcaaggctct  | tcctccacca  |
| 53341 | ccggaagctg  | ccgaagccgc  | cgtgtcatgt  | ttgagagctc  | cataggtgag  | atacctcacc  |
| 53401 | ttacttggtta | acatcatcct  | ctcaccactc  | ggtgatgtca  | ccatatcttt  | agtttcttca  |
| 53461 | tcttccttta  | ggatgagttt  | gttcacctct  | ccatcttctt  | catcgctctc  | gtaacgttct  |
| 53521 | ttcacccacg  | tgttattcac  | gtgatgattt  | ctcgatacac  | gttcttcgtc  | gttttcggta  |
| 53581 | aatgtgtagt  | actccatgat  | tgatgtttct  | ttatgctttg  | agttatatat  | ttattagtag  |
| 53641 | gggtacacac  | tttattttata | gtgaacgatt  | gtgtttgtaa  | cttgtaaatg  | taatgtttaa  |
| 53701 | gcgaatcttt  | tttactttta  | actagaaaga  | taattcatta  | tatcgaaaaac | aaatactttt  |
| 53761 | tttttttctc  | cttttcaaaa  | aggttaccgg  | ccggacgtaa  | tatgtttctt  | cttagttatt  |
| 53821 | ttggataaga  | gtgattgtga  | tgcaaaactc  | ttaacaaaaa  | aaaaaaaaaa  | tagttcgtaa  |
| 53881 | ttagtctctt  | gaagcataga  | accataagga  | gttttccgaa  | aaaatccaaa  | ttattattct  |
| 53941 | ttaggtggct  | aatttatata  | ctgggtgaat  | tattgatgtt  | gggttatatg  | gtatagttta  |
| 54001 | gattttattcg | ttgttgacgg  | tagatcccca  | tttagctgct  | ttgttttacc  | attgcttttc  |
| 54061 | atttgaggatg | ttattgtttg  | tttgcttttg  | ttcaattgag  | tttagtttcc  | aaggatatct  |
| 54121 | tgtcatctgt  | ccggttagtt  | tcggggatta  | tgcatattgat | cgcaggctcc  | tttaattgtat |
| 54181 | ttttctttata | tatcatcaat  | gaaaaatcaaa | attctagtga  | gaaaaagaca  | gtagatatta  |
| 54241 | ttttttctta  | tacaaaaatc  | tagtttcagt  | ttgatagaca  | attattataa  | ataaagttgt  |
| 54301 | aaagatcatg  | taatgatgtt  | ttatttatgg  | tatttaatat  | tttttgtcat  | tcaattgtaa  |
| 54361 | aattataata  | tctataatca  | taaaaaatta  | tgttcaaaaa  | ataaaattga  | aaattatacc  |
| 54421 | aatatattca  | aattgaaaat  | agcatcataa  | aattttattc  | acattgtgta  | gcaaaaacaat |
| 54481 | gcttaaaagc  | tcattctcaat | aaagaggata  | attcagttag  | tgaaaagtaa  | ctaaccagct  |
| 54541 | cattcagttt  | agtgaatttt  | atattcatta  | ataaaaaataa | aacaaaaagt  | taaactgtaa  |
| 54601 | ttatgtttaag | aataatgtaa  | tataattgaa  | agaaaagtaa  | gataacactt  | tgtaaaatat  |
| 54661 | agaaagtcgg  | aattgaataa  | tactttggca  | aattcggatt  | ggtttgataa  | tgcaaaatat  |
| 54721 | tattatctct  | tagaatctta  | ttccaaaata  | tgaagtgaga  | cgatgactta  | cgattctaa   |
| 54781 | aattagctgc  | cttttgtgcc  | cacttagctg  | atgtcttaag  | caacggccca  | cgttacagct  |
| 54841 | ggtgaaatgt  | atattaatag  | actaaagtta  | tgaaaaactat | attgtaaaacg | atggagaaga  |
| 54901 | gaaataaata  | acaaattcgg  | taatatatat  | aaaaaaaata  | gaataaaaaga | cagatgccta  |
| 54961 | tacaagaggt  | ttatttagtt  | aattttattt  | atcaagttga  | acgtttttact | aaattatgta  |
| 55021 | aatgtttcat  | atattttataa | ccaataaaaaa | taatatcgaa  | agtgtgtaaa  | aaataaatca  |
| 55081 | tttgtttaac  | taaatataac  | caatcaaact  | tctttttttc  | aattcacaac  | cagaattgta  |
| 55141 | catcaataac  | aataaaaaat  | atacaaaacta | aaatttatag  | ccaaaaacct  | agacttacta  |
| 55201 | gagctaataa  | ctttttgtcg  | ttgattgatt  | ttcttccatc  | atattctttt  | atacccatac  |
| 55261 | tggtgtcata  | ttatgactgg  | ataccatttc  | agaatttcag  | atattcatca  | ttgccataat  |
| 55321 | ctataatctt  | ttttaaagaa  | aagtgatact  | cataaccagg  | tgtagacttg  | gagccacata  |
| 55381 | agccgaagaa  | acatagactt  | agagcttcaa  | atgttcatat  | atttcaacca  | ctaataattat |
| 55441 | caaaagtatc  | tgtagctaag  | tttggttaaaa | gttggtgatt  | atcactctac  | taatggcttt  |
| 55501 | gattgggttat | gttgatcac   | cgtagtacaa  | aatgtttacca | tcttatgtgt  | aaaccattaa  |
| 55561 | gtgcagtctg  | acgtcatctg  | tagatgggtg  | tataaaaggt  | gataaccaga  | atcttactac  |
| 55621 | tatctaacat  | tgaaatgtat  | tgccatctct  | taccactatt  | tatccgactt  | acacctttt   |
| 55681 | tttgtttgaa  | gaaatcagta  | gttaatagct  | acactatctt  | ttttgcttgg  | agccaacatt  |
| 55741 | ttatcagaat  | cggctctccg  | gtgacacact  | aatactgaaa  | cgtaacaac   | aagaaccgaa  |

55801 cagagtgggtg aaaaaataag aaacggaacc aagtgttaag tcgaattgta gaaagtttta  
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58261 cgaattaaaa tacgtctcca tgcacaaaat agataacata aacaattaac cagatcttgt  
58321 ccattaacaa aataacaaga agaagataac aaatctggtc catgtgtcca cgtacactgt  
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|       |             |             |             |            |             |             |
|-------|-------------|-------------|-------------|------------|-------------|-------------|
| 59401 | tgcaagaatc  | tgatctgcaa  | ccacataaca  | acaaaaaccc | aataagctta  | catacttgg   |
| 59461 | tactaacaca  | gatcatcaac  | atztatgttg  | gtgtaatgtt | acctcaagag  | gtaagagacc  |
| 59521 | ggtatttcca  | aggtcaatta  | tctgtttcat  | ttcaccttca | ggccattgat  | aaatatgcaa  |
| 59581 | atgacttcca  | tacaagccat  | ccgcaacatg  | ctggagattg | aaaccttttg  | agaaggcttt  |
| 59641 | aggtgcaccc  | caagaagtgc  | tgatcatggt  | cttgaaccga | ggttggtacc  | aaaaatcata  |
| 59701 | accaaacaaa  | ggaccatgtc  | ctggtttgc   | ccacctgctt | ttgacattga  | agtcagagtc  |
| 59761 | tagcaaaaaga | aacccgttcc  | ctttggcggt  | tcttctttg  | tccccaaggc  | atgacaccaa  |
| 59821 | catatccct   | gaagctaggc  | aatgagatgt  | atgtggaat  | gctaactctg  | tcttttcagc  |
| 59881 | aatctcctta  | ggctctacaa  | ccttgtacaa  | agacggagcc | tttgggtcgg  | tctttgtgtc  |
| 59941 | gattgcatag  | atgcgaccag  | aacttcattc  | aaacaagaaa | gaaacatatt  | tttagtcaat  |
| 60001 | tcatcatcaa  | gaaatgtgag  | aggtcaatg   | taaggatctt | acattaagcc  | tggttaagaca |
| 60061 | aggtaacgtc  | tatcagcaga  | agcatcacca  | tggcaagagc | tgcaagagtt  | ccaaccagtg  |
| 60121 | tggtgaagct  | catctcctat  | atatggcatt  | tttagtctgt | gaatgacgct  | tgaaaatgtg  |
| 60181 | ggtgagcttg  | gatccacatc  | caccgttgc   | aagtagtccg | gtttgtctcg  | ccccgttcc   |
| 60241 | aaattaacac  | aatcaaataa  | agcaaaagct  | ctcaaaacat | tacctagtac  | tagtacgtag  |
| 60301 | tccggtttta  | taagattaaa  | cggatttaag  | ccaactattg | ccaagggact  | tgagttacaa  |
| 60361 | gtccatgaaa  | cttaacattg  | ttatgtgatt  | caattgagat | tccatgggat  | ctaacaaaga  |
| 60421 | ttcttttaaac | gttaaaaagta | taagattaag  | tcagattttt | tttttagtct  | caaaatagca  |
| 60481 | agaaattggt  | gaataaaaaat | ataagttgaa  | aatgtttaac | aaaaaaaaata | tattttattta |
| 60541 | tatataagtt  | gaagatgaga  | aaatgaaatg  | tttaccggag | taaagggcag  | tgacatagat  |
| 60601 | gagcttttcc  | cgtggaccgg  | ccatggcggc  | gagaggcgct | gcgtaacctg  | gaccggactt  |
| 60661 | gcaacatcct  | ttgcttttgc  | cattgctcac  | cgccgtggct | aatacggttt  | cggttgccat  |
| 60721 | ttctctctga  | gtatgtggaa  | ttagtgaagc  | tacacgtctc | tgagtataatc | tcaaacgcaa  |
| 60781 | gcacacttgt  | gatataatatg | agtaggaaac  | ttttggctat | acgtaatacg  | tgagtaagca  |
| 60841 | cgattgtgac  | ttgtgtcggt  | gttatctaca  | tatatgtttc | tatttatatg  | tctctatata  |
| 60901 | aagtatgtga  | caagaaacaa  | tattcgttta  | ataattctac | ttttgctaaa  | gaggggttag  |
| 60961 | ttgtacatta  | agaaattgaa  | acagatttct  | tgcaagttgt | aaccaaagtg  | tatatggatg  |
| 61021 | tgttttgaat  | taagatatag  | atataaagag  | actttgttgg | tacatttttg  | gttttgggtt  |
| 61081 | tatattttat  | aacatttctc  | aaatttcacg  | aattcaaaac | ttacttccgc  | aattatctat  |
| 61141 | agcatgctaa  | aatatataat  | tagaaaaaaa  | atgtgaaatt | actaatcgtg  | aaaaattggt  |
| 61201 | caacacaaac  | attttcatta  | ttttattcat  | atcattcatt | attagcataa  | gtccatgcac  |
| 61261 | gtgttgttgt  | tactatagtc  | atgacttgtg  | agtttgtaag | tgaaatttga  | ataaacaac   |
| 61321 | atgttactta  | atccgtgagt  | tggtgagtga  | gtgagtgcta | ttaaaacagt  | gactcttttg  |
| 61381 | ttgttatcta  | caacgcata   | gaattaactc  | acccacttta | ttgtttcttt  | attgaggata  |
| 61441 | aaaatcgatt  | ttgcgtgacc  | gtagttacta  | tactattaaa | aaaatgtaaa  | aatctcaaca  |
| 61501 | attttcataa  | ataaaatggt  | acaatagaga  | agaagcttac | cagaagtcac  | tgagggaaca  |
| 61561 | ttttcctccc  | ttaaaatgat  | gatatactagt | cgcatctcta | actataatct  | ctctttctgt  |
| 61621 | aatctcactt  | atatgtttca  | gaacaacatg  | acaatctcca | caaaccctta  | gatttttcac  |
| 61681 | aatccgtata  | ggagttcccg  | gaacagcttt  | aagcaatccg | tatgcaacag  | cggatcggtc  |
| 61741 | gctatgccaa  | aacaaaagct  | tttctttctc  | ttgctcatcc | atgtcgtgta  | ggatccaact  |
| 61801 | agtatcagga  | acataacat   | ttcttatcct  | catttcttcc | tctagcttct  | taagcaatcg  |
| 61861 | aaaaatgtct  | tcttttagag  | gatgagatgt  | ttctcctgcg | taaaacaact  | cggtttcttt  |
| 61921 | ccgtacctcg  | acgctactgt  | gcctggatc   | ctttctaact | tccatttctc  | ctagtttctt  |
| 61981 | tcttgcttct  | gatacttttc  | cccacaaaga  | agcacttgca | tagatgtttg  | ataaaagtat  |
| 62041 | ataagtcgat  | ggatctttca  | gtttaaagct  | gcttacgaga | tgatcagcga  | ttcttatacc  |
| 62101 | catctgacct  | cgtccctggc  | gcttgcaagc  | gctaagtaaa | gcagccccatg | ttggttcac   |
| 62161 | tgagggaac   | ggcattgtat  | gaattaaagt  | ctcagcctca | tcaaggagtc  | cagagcgacc  |
| 62221 | gagaagatcc  | aataagcatg  | tataatgctg  | caaagatggg | cgaattccat  | agtccttagt  |
| 62281 | cattgattgg  | aaaagctcac  | ggcctttctc  | aacaaaaccg | acatggctac  | acgcataat   |
| 62341 | caaccaca    | aatgtgacct  | cattgggctt  | tacaccgtga | gaaaccatgt  | catcatacaa  |
| 62401 | cgtaaatgcc  | ttctcagcct  | gcccggtgctg | agccattcca | actataagcg  | atgtccatga  |
| 62461 | aactacatct  | ctgtgacgca  | tcctactgaa  | aatatccttt | gcagctataa  | catcgctgca  |
| 62521 | tttagcgtac  | atatcgataa  | ggcggttact  | aataaacaca | caagaatcaa  | atcctagagc  |
| 62581 | tataaccaac  | ccatgaacct  | gcctccccgc  | tatagaagct | gccaaattag  | cacaagcgcc  |
| 62641 | aacgatgctc  | gaaagaacta  | aaggatccaa  | aatgtcaact | ctttctctcc  | tcatttcagt  |
| 62701 | gaaaacagaa  | aaagcttcaa  | gccctttccc  | actctgtaca | aaaccagaga  | tcaacgcagt  |
| 62761 | ccaagaatac  | aaattcttga  | ctggtaatat  | cctaaaaagc | tccaaagctt  | cttctttctt  |
| 62821 | tccgctttta  | gcatatccag  | ataccattgc  | agtccatgaa | atgggtgttt  | tcactcttat  |
| 62881 | agaatcgaaa  | actgcttttag | cactattaag  | caatccacat | ttagcataca  | tatcaaccag  |
| 62941 | tgaagactta  | acaacttcat  | cattagcata  | ctcagagact | ataaaatggc  | aatgaacttg  |

|       |             |             |             |             |            |             |
|-------|-------------|-------------|-------------|-------------|------------|-------------|
| 63001 | cctcccgtag  | tcaatagatc  | ctaagttagc  | acaagcctta  | acaagagccg | agaacacaaa  |
| 63061 | atcatcagga  | cgcaaccag   | agctcgaacc  | cactgaagaa  | aatactgata | gtgtcttacc  |
| 63121 | agagagattg  | gcttgattaa  | gagctgtgag  | aaccgaggcc  | caggcgatgt | gatctctatg  |
| 63181 | aggcatttcg  | tcgaacacct  | ggagagcatg  | agaagcagca  | ccgcatttcc | catagacatt  |
| 63241 | gacaagtgtg  | ttggccaaag  | ggcaacattg  | aacgatcccg  | agcttgacga | tgtgggcatg  |
| 63301 | gagggtttaa  | gcagtggtaa  | gggttcgatt  | cctggcgag   | agctggagct | gatgaagata  |
| 63361 | gtgagggata  | agcattcatc  | agctgttggt  | gcttaagggc  | ttctagagtt | attatggtaa  |
| 63421 | cgctaataatc | taaattagtt  | tacacttttt  | ctatatatgt  | attgaaatta | acaaatttga  |
| 63481 | aaacaacatt  | tcagttattt  | aattcgtaaa  | caattcaatg  | taataaatct | acttattctc  |
| 63541 | tattattttaa | tttatttaatt | ttatttatct  | ttaaatat    | catgaataat | aataaattta  |
| 63601 | tttatgtatc  | actgatttag  | ttattcttct  | tatacataaa  | aatttaaata | aatgcaaata  |
| 63661 | ataacttaat  | tgattgtttg  | caacagtaat  | acagtaataa  | aattcaattt | tgtaaacaat  |
| 63721 | ttttcgtaaa  | acgtattact  | agaatcgaat  | tatcacgaaa  | ttttctacaa | gactaaaaat  |
| 63781 | ttaaaatcaa  | ttatgcgtca  | aaagtatatg  | ttatctcttt  | atcaatccct | tggtggtaaa  |
| 63841 | tttgagacca  | tcagttacat  | ttgagtaatt  | ctaagcattt  | gaaatttctt | accgatgaac  |
| 63901 | taattcaacc  | atacatgaga  | atccgcaatt  | ctccccgac   | atattatttt | ttgagtgtta  |
| 63961 | aacaattcgt  | aatctagtat  | taaagggtta  | atgaaaaaaa  | aatgaactt  | atccttttac  |
| 64021 | gtacacataa  | gactgtgtta  | acttgaaagg  | gaaaggggtg  | gtcacacata | ggaaaaagtc  |
| 64081 | tctagagcca  | agaaaaacat  | atctcacttt  | gtaactaata  | ctacattatt | gatcattcta  |
| 64141 | gacagggatg  | tttaacccca  | tcaacatatt  | aaattcaggg  | tatataatat | tatacttctc  |
| 64201 | agagatactt  | ttattgaatt  | tctgtcgttg  | tgacagcaaa  | tgcatggaaa | acgttcggcc  |
| 64261 | aataccctta  | gtctcttatt  | tgatttgagt  | tcatcatttg  | ccattagttg | tctttagtct  |
| 64321 | agagtaataa  | aacttattca  | atttaattgt  | ctccattttg  | gtttaacgtc | aattcaattt  |
| 64381 | tccactaaaa  | atccgcacgc  | aaacaaaata  | gctaggggac  | atatatacat | tcgagaaaag  |
| 64441 | taagaaccga  | aatcgaagaa  | cacaaacaat  | ttaaaccatga | atataaaagt | taatgaaaat  |
| 64501 | agtaactttt  | tacgtctcac  | cactatcgat  | tttctgaatc  | cattaagttt | tttaagaaaa  |
| 64561 | attatagaag  | aaattaaact  | aacctaccaa  | tcaaaaacta  | caaaaagagt | aaaactttca  |
| 64621 | accacacatt  | tagattgatc  | aaagatgaaa  | gatgtgggtc  | gcttgttgaa | aaaaaacaca  |
| 64681 | gaaaaagatg  | tggtcggatt  | ttggatcgat  | tgtttttggt  | ccgttctatc | gaattggatc  |
| 64741 | ggattgatcg  | gattaacgct  | actttaacca  | aataaactct  | cgttctaacc | ctagtatat   |
| 64801 | atataataag  | attcgctcaa  | aggttaaaac  | actttcaaaa  | atatgcttta | taaaaaaaaa  |
| 64861 | acatattcta  | aaacggctcg  | tttcagccag  | gttatctatc  | accggttcac | ctattttatc  |
| 64921 | ttttgtagaa  | agaagatagt  | gattcttacc  | ggcttccctg  | gaacttggtg | aacgtgaatc  |
| 64981 | actacacaat  | tcaaataact  | ttttaggcac  | agtaaattta  | gacttacact | tgtgaataat  |
| 65041 | aatgcattgg  | cattattggt  | tttttcta    | taaaaaaatc  | caatttgcaa | cataatagtg  |
| 65101 | caagatgata  | gaatcgtggt  | taaaaagttt  | tttggttttt  | ttcttaaata | gagaaaaatca |
| 65161 | aaacatatgt  | ttttattttaa | acgttacatt  | ctctatataa  | acgaaggaga | ccaaaagtga  |
| 65221 | aagtattcat  | caaccaaaga  | agaaacaaaa  | aacacacttc  | actcgctacc | gaagggaagag |
| 65281 | agatagagag  | agggagatgg  | ctacgtcagg  | aacatatgtg  | acggagggtc | ctttgaaagg  |
| 65341 | atcagcggag  | aaacactaca  | agcgggtggg  | gaatgagaac  | caccttttcc | ccgacgccat  |
| 65401 | cggccaccac  | atccaagggtg | tcaccgtcca  | cgacggcgaa  | tgggactccc | atggagccct  |
| 65461 | caagatttgg  | aactacacat  | taggtaaaaa  | atgtattttac | gtacttccgt | taattacata  |
| 65521 | taaccacagt  | ctgaaaacta  | gggttatgat  | gattatcaca  | taaaaaatga | taaaatttag  |
| 65581 | ttttaccaat  | taatgtgtca  | taagtataaa  | aagaaatcat  | ttatcaaacg | ttttgaccat  |
| 65641 | atgtaaaagtc | tatggaacaa  | accatatacg  | taatctttcc  | atttaaagca | ttcatcggaa  |
| 65701 | gtataatctt  | tgtggaagaa  | tctcttaa    | cttgaaatta  | gttgggtgat | acattacata  |
| 65761 | aacccaaaca  | tataaatgta  | gatgggaaac  | cggagatgtt  | caaggagagg | agagagatag  |
| 65821 | acgatgaaaa  | catggcggta  | acgttcgttg  | gactagaagg  | tcacgtgatg | gagcagctta  |
| 65881 | aagtgtatga  | taccatttta  | cagttcattc  | aaaagtcctc  | ggatgatata | gtttgcaaga  |
| 65941 | tcactatgac  | ctggggagaag | cgagccgatg  | actgcctga   | accagcaac  | tacatgaagt  |
| 66001 | tggtcaagag  | tctcgtcgtc  | gacatggacg  | cccacgttct  | caaagcctaa | tccctctcac  |
| 66061 | ctaaacccat  | catcatcgtg  | tgtgtaactt  | tgtatgatgt  | tttcaatata | ataaatgggg  |
| 66121 | gtttgcatgt  | atggtttcat  | ctactgtaat  | atgctttgat  | gttgtttata | ataattaatg  |
| 66181 | atttaaagag  | taattaatca  | atattgtcct  | aaatagtgtt  | tcactatata | ttgtacttag  |
| 66241 | tggttgatatt | atccatcatt  | ttatatgttc  | atttaattgg  | tgtattattg | ctctctttat  |
| 66301 | tcgttgacat  | ctttatat    | tattttat    | tatataattt  | ttgtattctt | tgacacatcta |
| 66361 | gtgatgcctt  | cagcaactat  | tccctggtgc  | aactactatc  | taggactaca | tgccatctta  |
| 66421 | ccggctaccg  | ctgcaatacc  | atattaccat  | ctacaaagtt  | atctctcagg | ttctggtttc  |
| 66481 | aagctaggct  | tggtatatgt  | tcgttttagtg | gttgatttat  | attcatcaat | cattgttttt  |
| 66541 | ctaactgc    | gttctttctt  | cttgagtact  | gtatcattat  | taattggcca | tatatacaaa  |



|       |             |             |             |             |             |            |
|-------|-------------|-------------|-------------|-------------|-------------|------------|
| 66601 | aataaatatt  | agtattttttg | cttggtttttt | catttttaaaa | atatcatttaa | aattctaaga |
| 66661 | tcatattttag | aaaagaaaaa  | aaaaaaaaga  | tcgtgattat  | tagagattca  | agatagtttt |
| 66721 | catcgattta  | tattatcggg  | ttcagcctat  | caacataatc  | tcattttaatt | gggaatgaat |
| 66781 | ccacattacg  | tgaggataga  | aagattgaag  | ttgactaaca  | gaaaacggaa  | agagtgactc |
| 66841 | gaattttacgt | ccaatattac  | ataatattga  | gaaggaaaat  | agaaaggagg  | aagatcttgg |
| 66901 | attcgagaat  | gtggaagaaa  | atcatattcg  | aagacttaat  | agaagaaaaat | aaatagaaca |
| 66961 | gtcacaaaagc | aaaggacatt  | cgacttacaa  | gggaaaaacc  | ctaacttgct  | atcaacgcag |
| 67021 | ggaaaaaacc  | taacttgcta  | tcaacgcaag  | agagaactcc  | ttgtaattgt  | ataaatttgt |
| 67081 | tcttaaagat  | agatgagttt  | ccaaagaaca  | agtacaaaag  | tttaaataaa  | gaagggagag |
| 67141 | gagaagagtt  | tagtccttga  | acaagctcca  | agacaactcg  | aaaatgacaa  | aaaacataaa |
| 67201 | taaaaatttg  | aacgactcct  | ggccttctta  | tttctgtgtc  | ttcttctttt  | aaaagggttg |
| 67261 | gaccaaattg  | ataatgggga  | tttggaagt   | ttactcaagc  | ctcattaata  | acctactaaa |
| 67321 | gaaaactatg  | tgaacaaaac  | cttagaaggg  | aaaaaagtac  | tcaagtaaca  | cttagcccat |
| 67381 | taccaattat  | cttaggctat  | tataaaaaca  | aagtggtttg  | gataacttcg  | cttgagttgt |
| 67441 | ggtctaactg  | tctaagcaat  | tcgctaacaa  | cttggttgag  | aagtcttgtc  | ttcgattgag |
| 67501 | tcacgggacc  | cattaagtgc  | tccaaagctt  | cccccgctag  | atgctgctac  | tcggctatga |
| 67561 | gctccgggtc  | ttgttcgacc  | aaagttatat  | catgccctcc  | cttttgaaat  | ggatttgtcc |
| 67621 | tcaaactctgt | atcatctaca  | aaaaaggaga  | taaatcagaa  | acaataaaac  | tcgaacttat |
| 67681 | attatactta  | cctcgaagat  | caatttgata  | aaaattatca  | ttgatccgtt  | ttgtgatggt |
| 67741 | taacgacccg  | tcgatccttg  | acatcaattt  | gctacgcctt  | tcgaagtaga  | actgtcccca |
| 67801 | aattctattg  | acaaggcaag  | ttgttggtgc  | ttgcatagct  | ttcattctgg  | ataccactag |
| 67861 | tgccatgctt  | ttttggtgta  | gaactctccc  | caatttctat  | tgacgagatt  | agttgttgtt |
| 67921 | gottgcatag  | ctttcattct  | ggataccact  | ggtgccatgc  | ctgccctctg  | attcatattc |
| 67981 | tttccctttt  | gtgaaaaaga  | ccatttcttc  | cccaaactca  | acaactcatt  | cctttatctg |
| 68041 | actaaggaaa  | atgttcatcc  | tatcatgatc  | atttgactgc  | gtagaggtct  | ctgaatcatc |
| 68101 | gagacaaaac  | ccgcttgcat  | catcttttagc | catcacacct  | gacccaaaga  | cgatgacgtc |
| 68161 | gatattgtcca | cactttgatt  | cgagtttcat  | atctcttgag  | tttgaggtat  | ctctcgagct |
| 68221 | tctccaaact  | cgagagatat  | gcaacttgaa  | tcaaagttgt  | aaagagccca  | attgtgaggt |
| 68281 | gttcagactt  | tttttggttt  | tctttaaata  | gaacaaaaaa  | cgccaaaaat  | ttcagaacgt |
| 68341 | ttaggactgg  | caaaaatctt  | gtgatacatt  | gtacatataa  | tttcatttaa  | tgtgatgaac |
| 68401 | tgtgatttag  | ctttttcttt  | ttatatcagt  | tgaattttaa  | cttttgaga   | atatcataaa |
| 68461 | ttccatattt  | ccactaaatt  | atagaaaaat  | aaagattttt  | tgttgaagat  | taaaagaaac |
| 68521 | tttgaccaa   | tttatgtaga  | agagattttt  | aaccttttta  | aacaatgaga  | ttatatcttc |
| 68581 | cataaacata  | aagtggacac  | tttgaaaatg  | gatttcttac  | ccaattctcc  | ttatttattt |
| 68641 | tctaacttaa  | catttttaggc | cttgatacaa  | tatcagaatc  | ggacatgacc  | aagaccaaac |
| 68701 | cagactgtcc  | ggttaaccat  | acctatagtc  | aaatcaagaa  | aaaacctatg  | gttgcttact |
| 68761 | catatgcaa   | tcaaccctaa  | gaagattaat  | ggttcaggag  | aaaacacaaa  | tcaaagatgg |
| 68821 | tcctcggcga  | ctcaccgcga  | ccacaccaaa  | ctctctacca  | ccaaattaat  | agagattccc |
| 68881 | ccaaaccaa   | ttgaagattc  | atcaacaaac  | cacacatttt  | aagatcgttt  | gatcaaggaa |
| 68941 | taatcataaa  | acaacgagcc  | agtccactag  | aatgccgtga  | tgaccactt   | gaatgaagcc |
| 69001 | aatttcactt  | tcacaccccc  | aaagtcaact  | ttcatcgacc  | catattcgac  | atttactgat |
| 69061 | attataattt  | tttatgaaga  | atgggcaagt  | catttctgaa  | tagtacggaa  | ccattcacct |
| 69121 | agtttttacg  | agaaccttcc  | cgaatcgtag  | caagttcagt  | ttcctcaatc  | aaatgacata |
| 69181 | tttcctagaa  | caatattgaa  | atttcaccaa  | ccaacaacct  | attttatgaa  | gaattggtga |
| 69241 | ggaagatttg  | tgtgttatca  | aggtatatcg  | aagatggctg  | agagacactc  | aattcagact |
| 69301 | atacgagcac  | ctacctaag   | ctgttttaagg | aaagtttttt  | ttttctttcc  | tttgtatgca |
| 69361 | tctcaaagcc  | acatatggaa  | actaagagat  | ctgttacaca  | ttctagaagc  | ttctccacac |
| 69421 | gtccagtggg  | acactttccc  | cacttgatca  | tgcaaagacc  | aaacttgcca  | tatttggatc |
| 69481 | tagaaggttt  | aattcacaaa  | aactcttttc  | ttgtcactgc  | tgctgcgttt  | ttaaggccct |
| 69541 | ccacatgtcc  | cacaatttcc  | caagataata  | cacaagtttt  | atttggttta  | acattacaat |
| 69601 | agactacaaa  | ctaaaaatg   | catatcacct  | tgtctcaaag  | taaggtaaat  | cattggagga |
| 69661 | tgttctgtaa  | tatgtccata  | tcattctttc  | caatgtgtga  | tattattatc  | cccaagacag |
| 69721 | aacttgtagg  | acacgttata  | tttatccttg  | ataatcaatg  | aatttaaaga  | gtacattact |
| 69781 | tacttagtgg  | ttgtattttt  | ccctattttt  | ttcatcattt  | tatatgttca  | tttagtgggt |
| 69841 | ttattattat  | attcaccaat  | catcattttt  | cattattaat  | tgcccggtata | caaaataatt |
| 69901 | agaaataaaa  | aattttacaag | ctgtaaaatg  | ttttgtttgt  | atatattctt  | taaggctatg |
| 69961 | attttattgt  | tatagttaat  | attagcaaca  | ggaacaagac  | taatacaaat  | gtcttaactg |
| 70021 | tagagttgat  | caatctcctc  | tttgtattta  | gccacgacca  | tgtcccgctc  | aatcttcata |
| 70081 | gttggtgtca  | ttaacccgtt  | gtctatctgc  | attgttgtgt  | cattaaagag  | ttctcttaat |
| 70141 | aaggtcttaa  | aagagtcctg  | aatcagcaga  | acagcaataa  | gaaaggacta  | taaatattta |



70201 ccgtgaaagg gtcgtcgacg atcaagactg gtccgacttg aaacgaacat tctgatgtcc  
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71161 ggatgccag ctgagccaag aacctttagt agaaaaacaa agacgaaacg atatcctgta  
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71281 cccaaggaaa caaaaacaaa gttgtctcag tgggaaaaga gactagctag tgaagttctg  
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71461 ttcaaagcgt tgtgtgttca caactcgttt agaaaacaga aggcagaata acttacattg  
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72121 atctccatat atgccatact gactttgatc aatgtaagtg ctagaaattt acggccagca  
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72241 gaatgacaaa acttgtaag aaccaacgca tagaatccat cattatatat aatatgaata  
72301 ttgtgcaaac ttttaacttg aaaaatgaca aacctgtaaa gtgtctcata tactagagga  
72361 acggacacaa tatagtccgg ttggtaccgc ttttagatcat cctataccaa aagaaaacaa  
72421 aaataaaaaag gaattagagc caaagaagc aacgctaaat gaattacttg atacattctg  
72481 caaatttcac attttccac tttccagtgt ttcataacta ctatggcaca atgatatttc  
72541 atgaattttc ctaacgacaa tgcttggaag tgatactgac taaataaaat cggatgaaga  
72601 gaataacott taagtatctt atagatgtat acatttgctc aactccacaa gtgaatatga  
72661 agtattcaact agcacgttca taggcattgc atgatggtag catgcttaga aatttatccc  
72721 cagcttgagc aggtacatat ttggataaat gttttatctg gaaaatgttt aagaaaagga  
72781 ttctcaaaaa tattattttt tcagaaagta ataattaata cttgataatt aaaagagaca  
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72901 agattccgat gtgtaagcat aacgcctttt ggatttccc tggtaccact ggtatacata  
72961 attgcagctg tatcatctga atcgatgaat tgatttctat agctccctgc agtcatctgt  
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|-------|-------------|-------------|------------|------------|-------------|-------------|
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| 73861 | tcaataacttg | ggacgagcaa  | aggagaaatg | aaggaacagt | gtatattaaa  | atattgcacc  |
| 73921 | aagaagtga   | gttaaaaaata | gctaagcaaa | gctagcacca | tgagcttata  | atcaactgag  |
| 73981 | atgacagagt  | accacgtaaa  | attagaggaa | agaaaagaaa | agagaagaaa  | catctcaaac  |
| 74041 | gtatctcaaa  | agattgtttg  | tttgatggct | aatgtgtaag | gtaaggccct  | aagaagctag  |
| 74101 | gtgatataaa  | tttgaacgaa  | accaatcccc | ctagttcttc | ttgctcttct  | tataaactag  |
| 74161 | tgagtaataa  | tggtcttctg  | tggtcctggt | aggttcggac | ctaacaaaca  | ctaattccag  |
| 74221 | aggtagaact  | cacccccaaa  | agctagcttg | tgggggagag | ggtgccttta  | gacttataaa  |
| 74281 | ccatttggtta | ttcctttccc  | ttcgaatgta | agatcttcta | agttttactt  | agtaatatatt |
| 74341 | tgtctttttc  | ctccaaaagta | ggcccttatt | gggccccttc | cagttccata  | tcattcacca  |
| 74401 | catacatacc  | ttgatctgaa  | acaagccatc | ggcaggaggt | atcagcaaaa  | agtgcattct  |
| 74461 | tctcatctgc  | tttcaactcca | agaactcgta | agccctcagc | aaagtccaaa  | atttcttggt  |
| 74521 | ccaactgcaa  | atttaaataa  | agaatatgat | ggtttccggt | gctcaccaag  | aattaatatc  |
| 74581 | tacaatcaca  | atctatcaac  | gacctatcta | acaacaagaa | taatagttcc  | ctgcagaaca  |
| 74641 | cacggttgca  | ataaccagga  | gcagagtact | tattggttct | aggatcctaa  | gacagaagta  |
| 74701 | catataacaa  | agagcaatgg  | catgcctcac | taaaactcta | aaaatcagta  | aaaacatcaa  |
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| 74821 | attagctact  | ctaccctcat  | caccatcacc | ttaacaagct | attaagaatc  | agctgatctc  |
| 74881 | ccctcatcag  | ctattaagaa  | ctatactata | gtttttaatg | ttattcaaaag | tgaccagacc  |
| 74941 | aataacacag  | tatgaggttt  | ccacaatcac | atcaaacaca | aaaaataaaa  | taagcagacc  |
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| 75061 | acaggtctct  | gtttattctt  | ctttgcaaca | atattgatga | atagtaacct  | tagtaagaaa  |
| 75121 | actacctgct  | tgtacgtcag  | tttcaaagga | ggatcatgat | aaggatccac  | caatgcaact  |
| 75181 | ctatcaccat  | acttttctgc  | agatgatctc | caaatatcag | gaacagcctt  | ccattcacta  |
| 75241 | gagcgcaaaag | cagcatctcc  | cgaaaacgag | gagctttcaa | gaaatggaga  | agacggcttc  |
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| 75781 | gacccgaaat  | caatctgaac  | ccaaaatcag | gaaactgacg | agaaggagaa  | ccgtaagaga  |
| 75841 | gtagtgtaga  | aggtcccaaa  | gaagaagtcg | aagccatcgt | tgagggaagag | gcgatgaaga  |
| 75901 | aggaataatc  | aggtttcaga  | cgaatttgca | tttgagata  | agatgaagat  | gaggactgtc  |
| 75961 | tttatagaag  | aaatggaaca  | gagagagaat | gagatctcga | agcaaacgta  | gtaaccatgt  |
| 76021 | cgttgtcttg  | attttgatct  | tcactgggtc | cagaagaagc | tcaccggagg  | agattttttt  |
| 76081 | atatatacat  | tcaattaaaa  | aatttatgtg | ttttaattta | ttattattat  | tttttgtct   |
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| 76201 | acgacatttg  | gtgctgatga  | tccaattatg | gtctttacat | taattcttag  | ctaatttggg  |
| 76261 | tttgtgttta  | tgtcagaaaa  | tctaaaaatt | cttaaaatta | ttaaagtctt  | tgattttttt  |
| 76321 | gcagcttttag | ggcaaagtaa  | atctcccacc | catttacggt | ttttagctg   | ttacagtttg  |
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| 76441 | aaattactat  | ttattaatta  | tttgaatttt | ttttctcaac | atagcgaaac  | ttgaagcaga  |
| 76501 | aaaggtataa  | taaaaaaaag  | ataaggaaca | atattgagtt | atacgaataa  | tccagcttta  |
| 76561 | atcatgtgtc  | ttcttctctc  | agtcctctct | acagagtaac | gctcggaaac  | ttgcaacgat  |
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| 76981 | cgggttgaaa  | ccggttaagg  | gtgtttgacc | ggtgaaatct | acgtcgtaga  | ttggtgaacc  |
| 77041 | gtcgggatgc  | aagattcccc  | aatgtctctg | tgtccccgaa | ccggatttct  | ggttttctgt  |
| 77101 | gaataaggag  | aaaacaaatg  | tcggtattgg | taaaccgggt | cttgatgggtg | taccgattgg  |
| 77161 | aggacttgcg  | ctcatcttct  | tgatcagatt | acggttatag | gtagctgcgt  | tgagaatggt  |
| 77221 | ggctccgggt  | tcgtcgatgt  | caccgaaatt | aggccatccg | gtttcagaga  | tcgcgaggcg  |
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| 81061 | cttagggttt  | gattccggtt  | cgagagcttc  | gatatgttct  | cttagagtca  | caagagctga  |
| 81121 | cggtaatgcc  | ttcgaaggtt  | gaagaaacga  | cgggaggtca  | cgggtggtga  | tcagtggtgag |
| 81181 | tttcggtaat  | ttaatcgggt  | caacgtcgaa  | gagatgtttg  | taagaggtgt  | tgaagtagta  |
| 81241 | gtagtagatg  | tctagtacag  | tagctgggtc  | aatccagaga  | agtgtagttg  | ggaggtgaaa  |
| 81301 | ctcacgcgct  | accgtagaaa  | cccacgggac  | gagaacagag  | tagattaccc  | cgggtgatagg |
| 81361 | ctctgtttcg  | gtggtggcgt  | caagattggc  | tttgatgatg  | tctctcaggg  | cgtttgaacc  |
| 81421 | acatcgtttg  | agttcggaca  | tgtagatttt  | ctggtcttcg  | aatgacttga  | gaccgtcgtc  |
| 81481 | gaatccatcg  | gtgaaccaag  | cgaaggatag  | accttttgtg  | gaaggtggct  | cgcccatatc  |
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| 81601 | ggctagtgtg  | agcgccgggt  | tgatgtgacc  | ttgcgctggg  | aatgtttaca  | gcaagtaatg  |
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| 81721 | aagttttagt  | aaaagaaaaga | acatactcaa  | gctttttatat | ataagagcta  | aaccttttta  |
| 81781 | agtatcaatg  | gtataaaaaga | tggattagga  | ataattgaca  | atctttgcac  | tgtctgtctc  |
| 81841 | ttacaagacc  | ggtggatgag  | aaaagtctta  | tgtgacgacc  | gacgagtaac  | agccacgagt  |
| 81901 | agaaagatga  | ttaggaatat  | ttcagttctgt | ttttgatcag  | ttctcaacct  | ccacaagacc  |
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| 82021 | tttttagttt  | ttttttttat  | gattgtctaat | ttaatacaga  | cacaaaactg  | agaatttgat  |
| 82081 | ctcttttaac  | agtttggtac  | ttcacagtga  | ccatttgaga  | agttgcatcc  | actgtccatc  |
| 82141 | cattctcata  | ctgttaataca | aaaaataaaa  | caattatoga  | tgaatcaaat  | tttgtcatgt  |
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| 82321 | cactttcttc  | tttactcttc  | ttccctacaa  | ttacgatcgc  | caaaaacctt  | aaattttctaa |
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| 82441 | agctagcatg  | ttgtttgatc  | tttagctttt  | cggtttggtt  | tcaggaagtt  | gaaaaagatg  |
| 82501 | gatcttagtg  | gttgtagaga  | tataatcagt  | agtttaccag  | aagccattag  | ttgccatata  |
| 82561 | ctatctcttc  | ttcccactaa  | agaagctgct  | tccacttcgg  | ttctttcgaa  | aaaatggcgg  |
| 82621 | tatctctttg  | cttttgctcc  | taactctgat  | ttagatgaat  | ctgtttatct  | gaatcctgag  |
| 82681 | aatgagacgg  | aagttttctc  | aagttttatg  | gattttgtgg  | atagagtgtt  | ggcattgcaa  |
| 82741 | ggcaattctc  | cattacataa  | gttctctcta  | aagatcggag  | atggcgttga  | accagaccgt  |
| 82801 | atcattcctt  | ggataaataa  | tgtgttggaa  | cgcggtgtat  | ccgatcttga  | tctacacgtg  |
| 82861 | tatatggaaa  | cgggaatttg  | gtttccttca  | gagatgttct  | tgagcaagac  | actggttagg  |
| 82921 | ctgaagctaa  | tgctatatcc  | tctcttggaa  | tttgaagatg  | tttatctccc  | gaagcttaag  |
| 82981 | acgctttata  | ttgactcatg  | ctattttgaa  | aagtatggta  | ttgggcttac  | caagcttctt  |
| 83041 | tctgggtgtc  | ccatacttga  | ggatttagtt  | cttgatgata  | taccttggtg  | cacttgggat  |
| 83101 | tttgccctcg  | tgtctgtccc  | aactctcaag  | agactaacgt  | ttagcacgca  | agtgcgagat  |
| 83161 | gagtttccaa  | agagtgtgtc  | tattgatact  | ccgaatcttg  | tctacttgaa  | gtttactgac  |
| 83221 | actgttgcag  | gcaagtatcc  | gaaagtgaat  | ttcgattcgc  | ttgttgaagc  | tcatatcgat  |
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| 83341 | gattttataa  | tgcgtatatg  | caatgtgaag  | actctctatc  | tatcttccaa  | cactcttcag  |
| 83401 | gtttgttttc  | atcatgaaaa  | acaacttgta  | atctttttta  | cattgttcaa  | ggatttgagt  |
| 83461 | tagtgattgc  | aattgagtga  | tgataatcta  | gttgttgtgg  | ttgtgtttca  | ggtacttact  |
| 83521 | tacagttgtg  | atgctatacc  | aatattcaac  | aacctgactc  | atttaaccat  | cgagagtaat  |
| 83581 | cccgaagtga  | gatggcagtc  | attgccaggt  | ttgctcaaga  | attctccaaa  | tcttgaaact  |
| 83641 | cttatcttcc  | aagtaagaaa  | caaaacctt   | ggaaagcatt  | tggtgactca  | atttttcaaa  |
| 83701 | gtttaagaat  | atttcactat  | gtatgtttca  | gggcctcatc  | cacaaaagcca | ccgataaatg  |
| 83761 | tggagacgtg  | tgcttgtgca  | aacctcgtga  | ggagattcgc  | agttgcttag  | catcaagtcc  |
| 83821 | ggtgaagggt  | ataaagatac  | tgaaatttgg  | tgaaatcagt  | gatgacatgg  | agaagcagag  |
| 83881 | agagcagatc  | aagtatttct  | tggagacaat  | gccgaatctt  | gagaagatga  | ttttgtacta  |
| 83941 | caatacaaca  | agtgttgaag  | atgtaactga  | agtttcaagc  | cgacttcaga  | ggctagtctt  |
| 84001 | taaattagct  | tcatcgacgt  | gcattgtcca  | actaatctct  | gataacctca  | gcttgctatc  |
| 84061 | tactgtatcg  | acaaatgggc  | tcctctgttt  | ctaaagggtg  | cctcttcggt  | ttgaagatga  |
| 84121 | acctctttat  | ctcagagatg  | attaccaaag  | cttagggagt  | accttagctt  | gtcgtcacta  |
| 84181 | aaataatctt  | ctcttggttc  | tgccctaatta | tgttctaaag  | acgtgttatt  | taggctttgt  |
| 84241 | ccttattgac  | ttgcaatgtt  | aacttcagtt  | ttttcttggt  | acagttggtc  | tggtgtgtaa  |
| 84301 | aatgatcttg  | taagagtaat  | tggtaggagt  | aagcagacaa  | caaaagctga  | aacatccctt  |
| 84361 | ttgtgtaaag  | atctgcaaca  | aaaccgaatt  | aacattttat  | ctaatacaac  | aaataaaaaca |
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| 84481 | aaatatatta  | ttttatctaa  | tggagctcaa  | aatatcttcc  | aaaatcttac  | aaaatctttt  |
| 84541 | agccttttag  | gacaagacac  | taaaaaaagg  | ctagcctagg  | aagtaggaac  | tcacactttc  |

|       |             |             |             |             |             |            |
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| 84661 | tcatttttgg  | gagctatctt  | cacttttagcc | tacaaataca  | agtaagtttc  | aatatcgatc |
| 84721 | tttttatctt  | ttcaagctag  | cgtgtttgtt  | tgtttgtttg  | attccttagct | tctcggttgg |
| 84781 | aacacgtaga  | ggaagattga  | atcggctctcg | tgtcttttgt  | tttcagggtg  | ttgaaaagga |
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| 84961 | ggtatctctt  | tgcttttgtc  | cctaattctt  | atgttgatga  | ctctgtttat  | ctgaatcctg |
| 85021 | agaatgagac  | ggaaatttct  | acaagtttta  | tggattttgt  | ggatagagtg  | ttggctttgc |
| 85081 | aaggtaatc   | tcctctacac  | aagtctctc   | taaagattgg  | agatggcatt  | gatccagtc  |
| 85141 | gtatcattcc  | ttggataaat  | aatgtgttgg  | aacgggggtg  | atccgatctt  | gatctacacc |
| 85201 | tgaatttggg  | atcagaattt  | ctgcttcctt  | cacaagtcta  | cttgtgcaag  | acactgggtt |
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| 85321 | agcttaagac  | gcttttatatt | gaggcaaccc  | attttgaaga  | gcattgggtt  | gggcttacca |
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| 86401 | atcgacatgt  | attgtccaac  | taatctctga  | taacctcagc  | ttgtcatcta  | ctgtatcgac |
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| 86521 | cagagatgga  | ttgacaaagc  | tttgggggag  | taagtaccct  | agcttggtat  | agtcgctaaa |
| 86581 | atgattttct  | cttgtttctg  | cgtagtctctg | ctcaaaagat  | atgttattta  | ggctatcctt |
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| 87181 | gattcgagag  | tagggtagca  | aatcattcgt  | ttagagagac  | tgcttacttc  | tacgacacct |
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| 120961 | ttcatatata  | ttgccaaacta | aggaacaata  | atttctctta  | actatcacta  | taaaatgtaa  |
| 121021 | gctttgtgag  | atcatttggat | tcacacagca  | tcactaacag  | aacatcaacg  | ttaaacccca  |
| 121081 | gtagcagcat  | tctatataat  | ctgtggcaat  | ctcttctttc  | taacaaaaac  | aagttttcac  |
| 121141 | attgcttcat  | taaaacttaa  | tagaattaca  | aagatatgat  | accggaaatt  | gtattttgtg  |
| 121201 | tactttttaga | gcagcaagtt  | tgattaaagta | cttaagaaat  | attgcaaaagc | aaacatgatt  |
| 121261 | taaggtgcag  | tactgcagtg  | agaaacccaa  | aagaataaca  | aaccttgatc  | agaagctgtg  |
| 121321 | acacgtctgt  | caagtttttt  | acgtattcct  | cagtcagatt  | ttcaacataa  | acacctgact  |
| 121381 | tgacatcttc  | tctaactctgg | tgacacatta  | acgaaaaacg  | atgaacccca  | tgttttcccta |
| 121441 | cagaatataa  | accaagttaa  | atttgaaagt  | tcattttacc  | atcaggtttt  | tctggcttgg  |
| 121501 | gtccagtagg  | tctgttattt  | gctcgttgta  | aatctgaaaa  | ggaagaagaa  | tgaaattata  |
| 121561 | tatcaaactc  | tataaaatga  | aaccttcaaa  | caccatccaa  | acttatgtaa  | tgcagccagt  |
| 121621 | cactaaacct  | cgagtaatga  | gcaccgacat  | tggttaattga | gttgcccttc  | agcatgcttg  |
| 121681 | acttgttcct  | gcaatccaaa  | aaaagaaaca  | agaagaatct  | tcttcttaat  | gtgctaataa  |
| 121741 | ttgaacaagg  | tcaaaaccac  | gaattgaaca  | aaaccaggca  | tcacctcttt  | gattcgggca  |
| 121801 | aacaatcggt  | caaagacacg  | tgggggtcaaa | cctctttggg  | caccgcagag  | gtgctcttcc  |
| 121861 | aacaatccat  | ttgcaggacc  | ccacatggta  | tatgtttttc  | cactaccagt  | ctgagagaaa  |
| 121921 | taatttcatg  | atcagttaaa  | tcaataagtt  | acaatcaaac  | aatccaataa  | atggaaccct  |
| 121981 | gcctcaaagg  | aagacttttag | aaaataaaaa  | ctacctgtcc  | ataagcaaat  | acagaactgt  |
| 122041 | taaattccaga | tagacaattt  | tcaacaagag  | gggtccccc   | aagctgaaac  | atttgttccct |
| 122101 | gaggaagaaa  | caaaagacaa  | agttatagat  | tcggaatcat  | acaatgacat  | agcataataa  |
| 122161 | tatcaaagaat | catgcaaaca  | gatatcttgc  | ctgtgtcgac  | tcgggatttg  | caattgagtc  |
| 122221 | gaatgtgaaa  | gtttgtccac  | taactgtgag  | ggaatctttg  | gacatctttt  | ctactatcat  |
| 122281 | atcaccttcc  | tcccctttgt  | ttagaggctt  | cattctaact  | ataacctgaa  | atttggctca  |
| 122341 | atctgatcac  | cttctcttcc  | tcattataaa  | tgagtacgga  | atttcacaat  | tgagctatgt  |
| 122401 | tctaaacaa   | cctaagcctt  | caccaagtca  | ctctacacct  | ctcctattag  | aaacgtaacc  |
| 122461 | aaattttagaa | agtacacaaa  | ccatctccaa  | ttagaaacct  | aaccaattct  | agcaactaca  |
| 122521 | caatctttca  | attgggggtga | attcaaagat  | atgattcaac  | attacttaat  | tagaaatttt  |
| 122581 | gtctcgataa  | tacctaat    | ctgagaaaag  | gggtgaaatta | ccttgacacc  | tgagtctgaa  |
| 122641 | aaccagatt   | cgtcgagct   | ctccgacta   | agtttccgtt  | taagaggatt  | agacggcggc  |
| 122701 | ggacgcggag  | gcaacggatt  | cttcattctc  | atcgacctat  | ggtcaggcgt  | cgacgtgttc  |
| 122761 | cgatctagag  | gtggagcatt  | ttctttggcg  | gatcttaatt  | tgcgtggagg  | cttcgatttc  |
| 122821 | gagatactag  | ggtttggcga  | gtgtggctct  | ccgccgtcgc  | gtaagatagc  | gtttcttggg  |
| 122881 | aacgtaaagt  | gcttcttcat  | ctccgcgctg  | aaatctacaa  | ttagaaacct  | aaagtagaag  |
| 122941 | aaagagggaa  | agtaaatcga  | atctgcgctt  | ctacgagagc  | gtcagtgaac  | ccctagtgtt  |
| 123001 | tgggcaaaga  | aaagagggaag | agaacgaga   | gaagagaaga  | gagagagagc  | cgtaaagag   |
| 123061 | cgagaatttt  | gaatttgttt  | ttgtcagatc  | ttgtgaagtg  | ttgacgattc  | gcatcacatg  |
| 123121 | aatttctaaa  | ttattttatt  | taaaaagaaa  | tgaattttat  | gtgatcgtga  | ctttatggcc  |
| 123181 | gtaggatgaa  | tccaacggag  | ggaatgagca  | acaaaaaaag  | aaaaggccca  | cgtgtgtgtt  |
| 123241 | taatgggtgtg | gttttttagtc | tttagacgtg  | tggtagtaat  | actgccgcac  | gggtttttta  |
| 123301 | agatccaccg  | cgcgtaaaaa  | tccaatccat  | ccgctatgga  | gcgggtatgg  | gtttaaaaact |
| 123361 | tttgaccctg  | tacgaagcat  | ggctcgcgag  | taatcgtatc  | gtgggttgca  | gatttagtgg  |
| 123421 | ttgtcattgg  | gcagcagtag  | tactcatttc  | tatcttcaac  | tatattatat  | gtctttgact  |
| 123481 | gtgaataaat  | gtagtctgaa  | cgacaaaatc  | atcaaagcag  | taaattagtc  | aatagcacag  |
| 123541 | attttttttt  | tttgggttaa  | aagtcaatag  | cacagatgcg  | accacattta  | gtcattttact |
| 123601 | tacaatttag  | tcttaccac   | gacatgaaga  | gctaataatga | gtgtcaaaaa  | atacaaaatt  |
| 123661 | cgatggtagc  | gatgagcaat  | ctcttcaaaa  | ttgaagtaag  | tgattcttat  | gtcataaaat  |
| 123721 | tcattgaata  | ctagacaatt  | cattgaagat  | gatgcaattt  | aaaaattaaa  | aataaaaaaa  |
| 123781 | ttcatacatg  | ataaagcatg  | aattgaaatt  | cttcattgcaa | tttaaaaaaa  | aaataaaaaa  |
| 123841 | attcatacat  | gataaagcat  | gaattgaaac  | taatgtcagg  | tcctccggac  | ttgggagcgt  |
| 123901 | gtgctaaact  | gctaataata  | tcaagagagt  | aaacaaaacc  | acttgcaaat  | tttataaaat  |
| 123961 | ctgccaaaaga | ttagcagatt  | atgctgataa  | cttggtacaa  | tagtaggcaa  | aatcttattc  |
| 124021 | tactataaaa  | tcttctcaag  | tcttcacaac  | tattcaccat  | gtacttgaag  | tcgaaagaat  |
| 124081 | gttctcatat  | atatatatat  | attttgttac  | gaatgttctc  | atatatagta  | tgccaaataa  |
| 124141 | accacaaaat  | ttgtctgaca  | caagatagag  | tatcatgctt  | agtcaaaaata | tgtaaatatt  |



|        |            |             |             |             |             |             |
|--------|------------|-------------|-------------|-------------|-------------|-------------|
| 124201 | ctcctaaagt | tcacaactac  | ttgcacactt  | tcattaagta  | tgctgctatg  | tttacaatatt |
| 124261 | atacaataaa | aatcgtaaat  | tttgtagtaa  | acgtggcaaa  | ctagcataaa  | taaataatct  |
| 124321 | aaggcttcta | gtaatctttg  | cattacaact  | tgcataat    | ccataagatc  | tattggatat  |
| 124381 | tgtaaaatct | gccaataaaa  | ccacgtatct  | tttaagaaaa  | cacaggagac  | taacccaaaat |
| 124441 | aaatccaacc | gtattataat  | tctctaaatt  | ttacacattg  | actcacgaac  | atttataaaa  |
| 124501 | tctgccatat | tcgaaaaatt  | tgtaacaac   | atccctataa  | tgtttgagag  | acatgaaaaa  |
| 124561 | ttagcaaaac | atatgctaaa  | tgtgctagta  | atccctaata  | tacgtttaca  | taattttttt  |
| 124621 | tttgaccgat | tttaattaga  | gctcaaaa    | atcatccatg  | aaaaatgtac  | gtttacataa  |
| 124681 | cattttccat | actttgtaaa  | atccgtcaat  | gttgataaa   | caatgttatg  | aaaaacattc  |
| 124741 | aagtctacaa | aacaaaacct  | aagtttctat  | ggcttataat  | taatcccata  | gttttttaatt |
| 124801 | catgttagat | ttgttaaaat  | tttgctagcg  | ttgatgattt  | tcttgtattc  | taaaatttta  |
| 124861 | attttttgaa | aaaaattaat  | tcgagaaatt  | ttttcactaa  | aaagacaatg  | tttttttttt  |
| 124921 | tttaatttaa | acttaaatct  | aactcttctt  | tttgtcaaat  | atagattcct  | attattctta  |
| 124981 | ccttttataa | tttatcttat  | ttccttcttt  | tttttaaaag  | agattttaca  | taaataagta  |
| 125041 | atattgacca | aagatataga  | acacaccaa   | aaagaggcaa  | agatatagaa  | aacatactat  |
| 125101 | ttagattttt | tataaatttt  | ggtagatata  | ttagattatt  | ctagcaaatc  | tcctttaatt  |
| 125161 | gtttttttta | acagcaaata  | tcctttaatt  | acatcaaata  | cgtaaagggt  | gaaaaaaaaa  |
| 125221 | ataacaatag | aatttttagta | atgaattaat  | taccaatact  | tgacccaaac  | ccgaacctaa  |
| 125281 | acaccagatc | catcgtcata  | atccatccaa  | tcaaattgac  | tcacgtgtgt  | gtgacctccc  |
| 125341 | agtgattaag | ccgcgactcc  | tcctaactcg  | taatccctca  | cgtctctgag  | aattctcagt  |
| 125401 | ttcttcagtt | tcattgcaat  | tcaattcccg  | atctgatccg  | ttcctgctta  | gatcggagca  |
| 125461 | aaacaatggc | ggagatggcg  | gataaggcga  | aagtggagga  | gatggattgg  | gaaggatttg  |
| 125521 | atggagttcg | tatgacttgg  | aacctttggc  | ctcgacttaa  | ggttgaagca  | agcaagtgtg  |
| 125581 | tgattctctc | cgccgcttca  | atttcaccga  | tcgctcgta   | cccccttata  | cttgatctcc  |
| 125641 | cttatgctcc | tctcgattgc  | aagacttgta  | aagctcttct  | caacgccttc  | gctcgtgttg  |
| 125701 | atttcgcgcg | tatgaactgg  | gtctgtcctt  | tttgctatca  | taggaatcat  | ttcccttctc  |
| 125761 | attaccattc | gatctctgag  | attaactctc  | ctggtgagct  | ttatccccag  | tacactactg  |
| 125821 | ttgagtacac | gttgccctcc  | gatccgtctc  | gtgtgcctcc  | accacctgtg  | tttggttttg  |
| 125881 | ttctcgatac | gtgcatgatt  | gaggaagaat  | tggtgatagc  | caaacgggct  | cttaagcagg  |
| 125941 | cgatcggggt | gcttcgggag  | aatgctttgg  | ttgggtttgt  | gtcgttttgt  | actcaggctc  |
| 126001 | atgtgcatga | attgggggttc | tctgagatgt  | ctaaagtttt  | tgtcttttaa  | ggcaataaag  |
| 126061 | aagttacca  | ggatcaaatt  | ttggatcagt  | tggtggcttg  | gtcttcttcg  | aggagagctc  |
| 126121 | ctacttctgg | gttttctaaa  | ggagcgcaaa  | acggattcca  | gagttccggt  | gttgacagat  |
| 126181 | tcctgctgcc | cgcttcggag  | tgtgaataca  | caactggactt | ggtgggtaat  | ggttttggtt  |
| 126241 | tggatagatt | tacgtctatg  | tttgttttta  | tttaactcgt  | gtttgtgtgc  | aattttcaat  |
| 126301 | cggattcttc | tgcttctaaa  | tgattcggtta | tttgtaacat  | ggatttgaac  | actggtgtgg  |
| 126361 | ctgatttttg | gtatgcagct  | tttggtatgag | ctccaatcag  | accagtggcc  | tggtcagcca  |
| 126421 | ggtcatcgtc | cccaacgatg  | cacagggtgt  | gcattgagtg  | tagctgcagg  | attgcttggg  |
| 126481 | gcttgcttac | ctggaactgg  | tgctagaatt  | gtagctttgg  | ttggagggtc  | atgtacagag  |
| 126541 | ggccctggaa | cggttagtgc  | ttattgatct  | ctcggttgat  | ggcactctca  | agttttatcg  |
| 126601 | ctccatattt | tgaaccatat  | ttgttatatt  | ctgaatcaaa  | ttttctttct  | tttgtctttt  |
| 126661 | cagattatct | caaaggattt  | gtcagatcct  | gtgcgctccc  | acaaagatct  | agataaagat  |
| 126721 | gctgctcctt | attataaaaa  | agctgtaaa   | ttttatgata  | gtattgcaaa  | gcagcttgct  |
| 126781 | gtcagggttc | atgtgttaga  | ccttttcgct  | tctgcacttg  | atcagggtatt | aattgtcgtg  |
| 126841 | attatagttt | gcttggtggc  | atgatgccca  | acctctggtt  | ttgttcttca  | ggtataaatg  |
| 126901 | tgtagtttct | tgcaatgctt  | gatttttcaa  | ttttgtctat  | gtcgtgtgta  | tatttttagct |
| 126961 | aaaatgaatg | ccatgcctca  | ttactctctt  | gaaagtgttg  | ttttatgtgt  | atgatcttga  |
| 127021 | atatgtattc | ttagtacta   | aattgttagg  | tgaatttgac  | attgttgatg  | cacaccaatt  |
| 127081 | gtgaaagctc | ttacttgtag  | tcgagttgtt  | taactaacct  | gtgatcacca  | gtttctattc  |
| 127141 | ttttccttct | gattattttt  | gcagatgtta  | gtagttgcgc  | acgaaagagc  | gtccatttgt  |
| 127201 | agatatctgt | tacatacatt  | ttgaaatttt  | gaagggtcaat | ctatgtgatt  | gttttagaac  |
| 127261 | atccctttta | tctagaaatc  | agaattgttt  | cttttaacac  | tatagaaaat  | atgctttccc  |
| 127321 | aagccatata | agaaaccccc  | gcttttctat  | tcacattgtt  | ttcctttgcc  | tcataaaaga  |
| 127381 | cgtattatat | caataccatg  | ttttcttttt  | aacttcagtg  | ttgataggct  | ttgcttggtg  |
| 127441 | tatctatcaa | aaaattccac  | tttagctatc  | atttccatca  | catgatacga  | tacctacta   |
| 127501 | taattgtttc | tgctgttgca  | ttttgggtat  | agttagggtc  | gggttgctga  | aatgaaagta  |
| 127561 | gccgttgaaa | gtaccgggtg  | tctcggtgtt  | ctgtctgaaa  | gttttggtca  | ttctgtattt  |
| 127621 | aaagattcct | ttaagaggat  | gtttgaagat  | ggcgagcact  | ctcttggtct  | ctgcttcaag  |
| 127681 | tatgtttctg | ctctgcttct  | gtgtcaaac   | tttgctatta  | tatcttctgt  | tgagttggtg  |
| 127741 | ttgcaagata | aataatattt  | tggcaattaa  | gaccctttct  | tgtagagcat  | tatgcataat  |



|        |             |             |             |             |              |             |
|--------|-------------|-------------|-------------|-------------|--------------|-------------|
| 127801 | actgcttgta  | tgctatgata  | atatatatatt | tgcattcctt  | agtgcacaaact | aactccgaac  |
| 127861 | ctttcatatt  | cagtggcacg  | cttgagataa  | attgttcaaa  | agacatcaaa   | attcaagggg  |
| 127921 | ttatcgggcc  | ttgctcatca  | ttagaaaagg  | ttttacctgg  | agtgccttaga  | atccattttta |
| 127981 | tttcaagatg  | tatttttaaat | gcttgggtgaa | tgaataaaagc | tatctgctat   | taattgattt  |
| 128041 | taatttatatt | tcatttgatg  | ccttgcagaa  | aggtcccaat  | gttgctgaca   | cagtcattgg  |
| 128101 | agaggggaat  | accagtgcct  | ggaaattgtg  | tggcctcgac  | aagagtacct   | gcttgactgt  |
| 128161 | attcctttgat | ctatcttcaa  | ccgggtcaac  | tgctcctgga  | gctttaaatc   | agcagttgta  |
| 128221 | tttgcagttt  | atcacaaggt  | attccttgcag | cttttgtttg  | tctctaattt   | tccttcattt  |
| 128281 | gttaaacttt  | ttatctgtct  | gcattaaagt  | attactttat  | atctagaagc   | attggattta  |
| 128341 | ctgttggtga  | ctcgattgca  | gataccaaaa  | ctctgaaggt  | aaaagtttgg   | cccggtttac  |
| 128401 | aactttaacc  | agacagtggg  | tagatactgc  | tgtgagcaca  | gaggtagctc   | tgttttctgc  |
| 128461 | caaacttacc  | actttataca  | aatgtttatac | gcaattgggt  | ttatatgtaa   | tctactagct  |
| 128521 | cttttaccgt  | agcactgttt  | attatgtttt  | ggtagcgttg  | ctatgttagg   | attataatct  |
| 128581 | ataactctgc  | tagcaagtat  | tattatttgc  | caagtgaata  | tgcggttaac   | gatagtaacc  |
| 128641 | tttttttttt  | tttggttaacg | atagtattgt  | taagcatggt  | atcatttttt   | gttctcattt  |
| 128701 | tgggtcaacca | aaaattaatt  | tccattttctc | actggtgtaa  | tttagtaaaa   | gctattttact |
| 128761 | gtgaatagaa  | agcaaaaaaa  | gctttgggtt  | ttgggatttc  | aacgggactt   | acatctttct  |
| 128821 | ttcttggaat  | aatttggttg  | ttaggataaa  | catggatccc  | ttaaataccg   | ttactgtata  |
| 128881 | acatactatg  | attcctaatt  | ctttattttta | tatgattcct  | aatccttagc   | ctcccatgag  |
| 128941 | tgttttgctg  | caaattcata  | tcagtgtgaat | ctcagaatca  | tgatgttggt   | tgcatgattt  |
| 129001 | tgacatatta  | tccacatggt  | aatgctagta  | ccagcttgat  | agccaatttc   | ttttacattt  |
| 129061 | tactattgtc  | atggaatcaa  | taataaccgt  | ggtcaggggt  | atgtgccatt   | catgtaaatg  |
| 129121 | tgttatggtg  | ttcaaatagt  | tttctggcaa  | gcaaacattt  | tcttaccatg   | gttgctgtat  |
| 129181 | acattctcag  | aatcttctgc  | aaggctttga  | ccaagaaact  | gctgcagtgg   | ttatggcaag  |
| 129241 | attaacttcc  | ttaaaaatgg  | aaacagaggt  | accttacatc  | atcttttctt   | tgcttacaat  |
| 129301 | atgtgagtta  | atttgaccgt  | gacttaaat   | ttttgtgctg  | ttggggtaag   | ggttaagctc  |
| 129361 | atattgcttt  | tgatgaatta  | aaatatgggt  | tcttttctcc  | tggccatatt   | tatttaccta  |
| 129421 | gggttcagga  | tctttggcca  | aatgttcatc  | tatatgtcca  | aaggaagtaa   | aactttactt  |
| 129481 | ttcccacaac  | taattgaggt  | ggattacagt  | tgtccctgta  | gcatcttggt   | tgaggaacta  |
| 129541 | ttgtggctgt  | atgagatgta  | gctttcatct  | ctttatacca  | ataatttgta   | gtctgtgtga  |
| 129601 | ggctcatagt  | gaaactctaa  | gtaacagttg  | ctatatactc  | atgtcttgta   | ctttgtttag  |
| 129661 | tgatgtctac  | tttatttttg  | tcataatactc | acgtatgcag  | tgtattatgt   | ataacctcag  |
| 129721 | gagggatttg  | atgcaactcg  | gtggctagat  | cggactctca  | ttcgtctgtg   | ttcaaaaattt |
| 129781 | ggtgaatata  | gaaaggatga  | tccaacctcg  | tttacgctga  | aaccatatct   | tacattgttc  |
| 129841 | cctcaattca  | tgtttaacct  | gaggcggtca  | cagtttggtc  | aggtagacta   | cogtttttag  |
| 129901 | atttcatcaa  | tatctgcctt  | tatgtaattg  | gcctacatag  | ttgaatcatg   | ttttcttttg  |
| 129961 | cgggtgttga  | atgggtggcag | gtctttaaaca | atagtccctga | tgaaaccgca   | tacttccgca  |
| 130021 | tgttgctaaa  | ccgggaaaaac | atttcaaattg | caattgtcat  | gatccaaact   | tctctgacgt  |
| 130081 | catattcatt  | caattcagga  | cctcaggcag  | ctttgctgga  | tgtggcttcc   | attgcagctg  |
| 130141 | acaagattct  | tctatttagat | gcataatttta | gtgttggttg  | cttccatgga   | atgactatat  |
| 130201 | cgcaatggcg  | aaacatgggt  | tatcatcatc  | agcctgaaca  | tgaggtaatg   | cacgctttga  |
| 130261 | accagtaatt  | gactgtttat  | ttgtaaaagc  | attttttttac | catcatttta   | cactttcgta  |
| 130321 | gctataaaaat | atatgtcctt  | ttgagttggg  | ttgttaacat  | gacatcggtt   | tagggtagaa  |
| 130381 | atccaaaattg | agacatctag  | ttttgaaaca  | atactcttca  | gagctgggtc   | catttatatg  |
| 130441 | caagtgaat   | aatgtgggtt  | gtagcaactc  | gcaagggtcaa | taatctctac   | catgggggtc  |
| 130501 | cattttgtga  | catctttata  | ccatcattaa  | ttctatgata  | tcctaaatct   | oggatgtctc  |
| 130561 | gtgtcaggcc  | tttgcctcagt | tattgcaagc  | tccgcaagag  | gattcccaga   | tgtagtccg   |
| 130621 | ggagcgtttc  | ccagtcccga  | gattagttgt  | gtgtgatcaa  | catggatcac   | aggttagcat  |
| 130681 | tcacatatgt  | ttttagttta  | tctgtgtggg  | atttgatctg  | atggttttca   | tcaccatttc  |
| 130741 | ctttataact  | ttacatcctt  | tgatactgca  | ggcaagggtt  | ttattggcta   | agctgaatcc  |
| 130801 | atcagcgact  | tacaacaatg  | caaacgagat  | gtcagctggg  | tcagacataa   | tcttactga   |
| 130861 | cgatgtgagc  | ctgcaagtct  | ttattgaaca  | tcttcagaaa  | ctggccgtgc   | aatcctgagc  |
| 130921 | aaagtagtca  | cagtcccagt  | ttgttttttg  | cttaaaattat | ctatatcttc   | ctgattaccc  |
| 130981 | gcatgcccg   | ttgtactatt  | ttagagctct  | ttgttatttt  | ggtctcacat   | aaaatacatc  |
| 131041 | atagttggaa  | gtctttttatt | tgcattggga  | tttgtctgga  | gtacagagat   | ttactatttg  |
| 131101 | cttcttcttt  | cttttttttt  | tgggatgaaa  | tctcttgat   | gattgatcaa   | ttatatgggt  |
| 131161 | tgggtctgtg  | gcttttagtac | ttttggctct  | tggacaactt  | ctctgcttct   | gatccagtat  |
| 131221 | gttgccgtac  | tgcgtttta   | ttaaaaaaat  | ctcttccaat  | aattattttt   | tgcaagttta  |
| 131281 | ccctcaactt  | gcaaaaaatga | agatcaaacc  | taaaaagtaa  | aatttaattgt  | gcaatataac  |
| 131341 | atttatgtgt  | gtcttccact  | gtcttttgatt | tgatatatta  | tttatcataa   | ttttaaaaat  |

|        |             |             |             |             |             |             |
|--------|-------------|-------------|-------------|-------------|-------------|-------------|
| 131401 | tgaaagtgtt  | gaccgagatt  | tatattgcag  | attcaattag  | atctcttgga  | gttgatttgt  |
| 131461 | atcttttgtaa | gttaaagggt  | aaaattgcaa  | caacaacaaa  | tattaggatt  | tttttttttt  |
| 131521 | tgaagaaaac  | cctgacattt  | atatgatgaa  | ttcaaatttg  | agagtaaaac  | atcttatgat  |
| 131581 | agtaacttgg  | tctttttaagt | tatatcgcac  | tgacctaac   | atcttcattg  | tcttatttta  |
| 131641 | tgctacgata  | tattattacct | tttaatacaa  | atactactta  | caaaatattg  | aaacttttaa  |
| 131701 | ggtacatgtc  | ttattatctc  | acctgaacta  | tgacatcgta  | tgagatagaa  | cctaaactgt  |
| 131761 | attatcacat  | acagttacat  | taaacgtttt  | ctacatgtgt  | aattcgttac  | agtttgaaaa  |
| 131821 | caaagcagat  | tattgtcatt  | cttcaaccgg  | agaaaagggt  | ttccaaagaa  | aaatatacca  |
| 131881 | attaaaatca  | gatcaaaaga  | agtcacccaa  | aacccaaaat  | aatattaact  | cctcggatta  |
| 131941 | acgttttcacc | aaaagggtcaa | aaagtatctc  | atcacttcat  | acatcataag  | gttatgacga  |
| 132001 | ggagtaagct  | tttcattttt  | taggataaaa  | acaaatacaa  | tcgactcaaa  | tgacgaacc   |
| 132061 | tcgagtgaac  | aaccatgctt  | ccatggaata  | taatgctgat  | atatagttaa  | cctcggatag  |
| 132121 | acaaacatgc  | ttgaacacaa  | ctcaaactta  | aaacccaatg  | ttgctgtttg  | tatctttgtg  |
| 132181 | aaaaaaataa  | aattagtttt  | tcacatctct  | ataatattca  | aataagcttg  | tttaatacaa  |
| 132241 | atatgttttt  | ggatttttgt  | ttcatcttgg  | cttatagaga  | gggaccttac  | atttaacttc  |
| 132301 | ctatgtttat  | tgttctctag  | ctacaagaga  | aatgattatc  | tgaccataca  | tctcaacatc  |
| 132361 | ctttgagtat  | acatcacttt  | taagccaaaa  | aaaaactatc  | acctgatcat  | cattaactag  |
| 132421 | ggtcaataaa  | catattgatt  | gaaacaagaa  | aaacagaaat  | atattgacta  | gaaaagacat  |
| 132481 | atcaacattt  | tagtgcttga  | aactagggtac | gaaccattga  | gctccataga  | attgaactga  |
| 132541 | tgaagaataa  | ctatcaagtg  | tgtgcagcgg  | ctccgtcttt  | tgtgtctcga  | gattgaagat  |
| 132601 | atagatatca  | tgtgtgttat  | tcccatgact  | agcactgaaa  | tagatggtat  | ttctaataaa  |
| 132661 | tccaccagtg  | tcattggcta  | gcacagtgat  | gccttgatcc  | aaaagcatcg  | actcatctcc  |
| 132721 | cagagaatta  | ataagccgct  | cttttttctt  | gaggaattct  | gatgaataaa  | acctcgaaaa  |
| 132781 | cccgggaagg  | ccaggttcta  | ggcctcgctc  | ccccatttcc  | ttcaaccttg  | aggacttttc  |
| 132841 | ctgttacggg  | gactacaagt  | tttgtggcaa  | gaactttcca  | tggttacttt  | gggtggaggag |
| 132901 | gtccaaactg  | agatcttttc  | actttaacac  | tccactcaaa  | ggtttgttgt  | ggaatatctc  |
| 132961 | cacaaaaatc  | aaagattttg  | aaactaccag  | ttttgtttag  | gaagtaaagc  | ttgtgatcct  |
| 133021 | tgtaaaccat  | gtggaacaaa  | tcagtaagtt  | tggggatttg  | attccaacat  | gtatctcctt  |
| 133081 | tcttgcaata  | aaatacacac  | caatccataa  | gtccccaag   | aactacataa  | tctttgtgtt  |
| 133141 | tctcgtcaat  | ccaaaacaca  | gggtctcgta  | tattcttacc  | cacgtacggt  | ttatacctaa  |
| 133201 | cacggtaggt  | gctaattgtc  | ctctgacttg  | catggcgtaa  | cgcataatct  | ttccacaata  |
| 133261 | aatctgcagg  | aggtagactg  | atccaatcat  | gggtaaagag  | attcacaata  | tagagatcac  |
| 133321 | accatcgatc  | tcccataagg  | agccaaactc  | catgagttgc  | cctacaaaac  | ctctttgtaa  |
| 133381 | attcctcacc  | aaaatcttgc  | gttttgtaaa  | ctttatcttt  | ttcctcgga   | ttcaacaacg  |
| 133441 | tgcatgaatt  | gttggtgttg  | tctcggggga  | atcaaatacag | ccaatggatg  | tgtttttggg  |
| 133501 | cacgacttgt  | ctggaagcag  | agtaccaaga  | ggaacacacg  | gatttagctc  | gggaagctcc  |
| 133561 | gaccaggtat  | gagacgtatg  | agaagtaggg  | ttatgcttat  | tctccatggc  | aaattggaga  |
| 133621 | gaacaaggga  | aatctcaaaa  | tgagaatagg  | gttggttacga | tttggtgaag  | aattagggtt  |
| 133681 | acgcttttaa  | tatagtcaac  | gagaagaaaa  | atctgcttgt  | tttgggattt  | taagaagtta  |
| 133741 | ttgggccatt  | aacatatcta  | agcccactta  | aacaattgtt  | tttggtgact  | tagctagaac  |
| 133801 | cgacgaagaa  | gaagatgaag  | tagcaattag  | agagaaaaag  | acaaggacaa  | gaagaaagt   |
| 133861 | gtgctgtcgc  | aaccaaacta  | agggtgtata  | tatgtgtgtg  | tggttaagtag | aaaaactact  |
| 133921 | aaggtatgct  | tgtatgtatc  | atgttgtgtg  | aaaggaatcc  | gagttatcat  | gttccaaacg  |
| 133981 | tttttgtgtt  | tcatcaaaaa  | agtagacaca  | aaacagagag  | tgaggtatat  | aagaattcgc  |
| 134041 | aataaaaagt  | tattctgaaa  | taattcaaaa  | aatgttccct  | tccggtatat  | caaatcccat  |
| 134101 | gatctacaac  | cctaataaca  | aaaagttaac  | tttgaaaaga  | gcttatcttt  | atcctattaa  |
| 134161 | acaccaagta  | tattctacat  | caaaagctta  | cttaagcata  | tcagtttgtg  | tataagcaca  |
| 134221 | agacattttt  | aacttatcca  | taacaattga  | aactttgtaa  | cccttttgac  | caccagcta   |
| 134281 | ctcttttgga  | tgatgaccct  | ctgcagacag  | ctgagactgt  | agtctccagg  | ccatgtttaa  |
| 134341 | atgtcttatt  | tgctgaggca  | atcaaaagtc  | ccttgctttc  | cactaacagc  | gaggtgaaac  |
| 134401 | atgccgtagt  | agctaaagac  | tgttttcaaa  | gtcggaccag  | acaccacaac  | ttttccatgt  |
| 134461 | acacaattag  | ctgtggtctg  | agcctcatta  | ccaaaatcta  | gatgtaagtt  | tcaagagctt  |
| 134521 | ttggtgcggt  | tttgatcttt  | accattctgg  | taatctttca  | catgtacaac  | cagaagacgc  |
| 134581 | tgaatctccc  | atcccattct  | tcatattgag  | ctacacccgg  | gaaccttaga  | aatctgtttc  |
| 134641 | tccttcaccc  | actgcctcag  | actctcagct  | tcatcaaac   | gacctgcagc  | tgaatataga  |
| 134701 | ccggccaacg  | ttacatagta  | gctagctttt  | ctcggcttaa  | gttgaatcag  | ctccctcgcc  |
| 134761 | actctttccc  | caacttctac  | atttccatac  | accttgccc   | cactcaacac  | cgcaccata   |
| 134821 | acagcctcat  | caggtttcac  | gggcatatct  | tccagaaact  | tctctgcttc  | ctccagaaga  |
| 134881 | cctgctcgag  | acatacaatc  | cgccacacta  | gcatagtgtt  | tcagttcagg  | aactatatta  |
| 134941 | tattcctgca  | ttagtctgaa  | atacagccaa  | gatttttcca  | caagaccgcc  | atgggcacag  |

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|--------|------------|-------------|------------|------------|-------------|-------------|
| 135001 | gctgataaga | caccaagaaa  | agtgacagca | ttgggttcaa | ttccttcctt  | aagcatctca  |
| 135061 | tcaaagagtt | taaaagacat  | taccacgtct | ccatccaaac | cataccccc   | aataagcgag  |
| 135121 | ctccaagaga | tcacatctcg  | tctcgacata | tttacaaata | cagtgtgcgc  | atagtccagt  |
| 135181 | atcgagcact | ttacatacat  | atctgttata | gcattgccga | gattcaagcc  | caagcaggag  |
| 135241 | catctcctga | tacaccatcc  | atggacgctc | ttcccgtgct | tcaacgctcc  | aagttgtcca  |
| 135301 | caagccataa | gtaaactcac  | catcaccact | gaatccagcg | caaatccaga  | atacccatt   |
| 135361 | tctctgaaca | tggctaaacc  | caacatagct | tctccttgct | gaacataccc  | accaaacata  |
| 135421 | gctgtataaa | gaacagagtc  | tctcacaggc | atatcgtcga | acaacttacg  | tgcattgtaa  |
| 135481 | agtttcccca | tatctacata  | cattatcact | aaagccgaac | taacaaacaa  | acttgagcta  |
| 135541 | aaccacagtt | tcaaacacag  | aacatgaatc | aaatctccag | atttcgcttc  | cctagacgca  |
| 135601 | gagcaagctc | gtagaataag  | aggaagcgta | aaatcatccg | gtctaacaca  | agactctcgc  |
| 135661 | cacatacgaa | gaaacaaatc  | aattgacttg | gaagcaaaac | ccgatctaga  | gaactcaccg  |
| 135721 | atgattatat | tccaagagaa  | aatggtgcga | taaggcatgt | gccagaagac  | agaaagcgaa  |
| 135781 | gtaggaaaga | gatggttcag  | cttggaataa | gcgaggacga | gcttgagct   | gagcacaacg  |
| 135841 | ttggaataga | gaaatgtacg  | aagaaggtga | gcgtggagat | ggcgtagatg  | tttagcgttt  |
| 135901 | ggagaatgat | gtagaagcga  | gaagagatca | ggaggattct | gtgtagttac  | tgataaagct  |
| 135961 | cgagctttca | agaacattgc  | gaatagactc | ttcgtaggag | acgagtacaa  | ggaagaggaa  |
| 136021 | gatggttaag | gcacgcac    | acaaaatcca | gagaatagtg | gaagatgctt  | tatgatttaa  |
| 136081 | tccaaaactt | tattttatga  | ttttatatca | aattttaaaa | taaggaaactc | ttaaaagtaa  |
| 136141 | tataactgta | aaatcatttt  | tgttgggacg | ccatttctaa | aagtccgaaa  | tttcccagtc  |
| 136201 | tctctctttc | gcgctctcac  | aatggttctc | caacactcac | agttgcaaaa  | ctccgatcat  |
| 136261 | ctcctccatg | aatctatggc  | ggattcaaac | catcaatctc | tttcgcccgc  | atgcgctaac  |
| 136321 | ggccaccgat | ccacaatttc  | tctccgcgac | gaccaagggg | gaacattctg  | cttaattctgc |
| 136381 | ttctccaatc | tcgtctccga  | tcacgcatt  | cccactgtac | atgtctccta  | cgcgcttcac  |
| 136441 | cagctctcaa | tcgctatctc  | tgaacctate | ttcctccgaa | ccttactctc  | ctctcatatc  |
| 136501 | cactttctcg | tatcgccctc  | cgttcacgct | ctctcttcga | ttgatgatgc  | tccaatcgct  |
| 136561 | atccagatta | tggatatgat  | ctctcttctc | tgttccggtg | aggaatcttc  | aatcgggtgag |
| 136621 | gattttgtgg | agagaatatc  | cgatcagctt | tcttctggtg | ctttgggttg  | gagccgaaga  |
| 136681 | cagctccata | tgggtattgt  | acatttctag | gggtttaatt | ggggattctc  | ggttgagattt |
| 136741 | tcgtgaatct | atcggataag  | cttgaaatct | atattctctc | atagattgct  | tattgtctgt  |
| 136801 | gttttgagc  | ttcactgctt  | tgggtgttct | atgagttgtg | agaatataaa  | tatcaattct  |
| 136861 | catatcagag | ataaagaagc  | tcttgtttgc | caactcggtg | aaggctcttc  | gttaccgagg  |
| 136921 | taatgtgcat | aatccacctt  | tggagaccac | tgtttttact | atattgtatg  | gggactggtg  |
| 136981 | tgatttatct | tttttctcat  | actagttagg | agatccgtgg | tgaaattctt  | tttgctctgt  |
| 137041 | acaagttttc | tgctctacag  | ttcacagaac | aaaatgttga | tggaaattgag | gttctttctt  |
| 137101 | tattgtgtcc | taagctttta  | tgcctatctt | tggaggctct | tgcaaagaca  | cagagagatg  |
| 137161 | atgttcgctt | gaattgtgta  | ggttcgtatg | agcttatata | tctacttcgt  | tcttatgcgg  |
| 137221 | tagacattgt | tttcatcttt  | aactcaacca | tgaatagatt | tgcatagtca  | tatcctaaag  |
| 137281 | tcctagttcc | tctacttttg  | agtcttgtga | cgcttaagta | attattcagc  | gttttccatt  |
| 137341 | ggaaaaatgt | ttggtgatat  | gttgtcattg | gctatagact | gactagaaaa  | ccatgataga  |
| 137401 | attgttaatg | aatttcttat  | agcagtagta | cattctcagt | ttgagtctcc  | cattattgtt  |
| 137461 | gttgttgttg | ttgtttcttt  | ttacttgtt  | atgtcagcta | acagagaaat  | ttgaactttg  |
| 137521 | tagccctggt | gaccatcttg  | gccagcaag  | gtcttttagc | aaattcacat  | tcaaatagtg  |
| 137581 | ccagcagcat | gagcttggat  | gaagtggatg | atgacctat  | gcagactgct  | gagaatgtag  |
| 137641 | cgcagggcc  | ttgtttaaat  | gtcttatttg | ctgaggcaat | caaaggctccg | ttgctttcca  |
| 137701 | ctgacagcga | ggtgcaaaata | aaaacccttg | atcttatctt | ccactacata  | tctcaagaga  |
| 137761 | gtacaccaag | caaacaaatt  | caagttatgg | tagaagaaaa | tgttgctgat  | tatatatttg  |
| 137821 | agatactgcg | gttatcaggt  | aatggcagtc | tccttgaata | ataagttaaa  | agtatactgc  |
| 137881 | tattgggcat | tcctttatac  | tggaaagact | aaaaagtgtt | ccagacacta  | gcggaaggtt  |
| 137941 | gagaagctaa | gaaatgaagt  | tatcatttaa | cttctttcag | atgtcaaagt  | cataattcat  |
| 138001 | tgtttcttac | acaattttta  | caacttgttc | agatagtctt | tatactgttt  | gccaattaca  |
| 138061 | atttccgctt | gattcatatc  | tttctcttgc | ttgccatttt | ttcctctgga  | agctcacatc  |
| 138121 | tcaacgagca | ttgatagata  | tttgttttta | tgtacctgac | tggcgatttt  | cttttcatga  |
| 138181 | acagaatgta | aagatcaagt  | cgtcaactca | tgctcagag  | ttcttgatct  | cttttcccta  |
| 138241 | gcgagcatt  | cctttcggaa  | gagacttgtt | attgggtttc | cttcagtcac  | ccgagtgcct  |
| 138301 | cactatgtag | gcgaagttcc  | ttgccatcct | tttcaaatac | agacactgaa  | gcttatttcg  |
| 138361 | agctgtatct | ctgatttccc  | tgggattgct | tctagttctc | aagttcagga  | aattgctctg  |
| 138421 | gttctgaaaa | agatgcttga  | aagatattat | tctcaggaga | tgggattatt  | tccggatgca  |
| 138481 | tttgctatta | tctgctcagt  | ctttgtttcc | cttatgaaaa | ctccatcttt  | tggggagact  |
| 138541 | gcggatgtgt | taacatcatt  | gcaagaatcc | ttgagacatt | ccattttggc  | ctctcttagt  |

|        |            |             |             |            |            |            |
|--------|------------|-------------|-------------|------------|------------|------------|
| 138601 | ctccctgaga | aagattcaac  | ccagatattg  | catgcagtct | acttactcaa | tgaagtatat |
| 138661 | gtgtattgta | ctgcatcaac  | atccataaac  | aagaccattt | gcattgagct | aagacactgt |
| 138721 | gttatagacg | tgtgtacatc  | acatctattg  | ccttggtttc | tctctgatgt | caacgaggtc |
| 138781 | aatgaggaag | caactcttgg  | cataatggaa  | actttccatt | ctattctgct | acagaattca |
| 138841 | gatattcaag | ccaaggagtt  | tgcagaattg  | cttgtttcag | cagattgggt | cagcttttcg |
| 138901 | tttggatgtc | taggaaactt  | ttgtacagat  | aatatgaaac | agaggatata | tttgatgctc |
| 138961 | agttcccttg | ttgatatact  | tctcgaacag  | aaaacggggt | cacatatcag | agatgctctt |
| 139021 | cattgtcttc | cttctgatcc  | acaagatttg  | ctgtttttgc | tcgggcaagc | tagttccaat |
| 139081 | aatcaggaat | tggcttcttg  | ccagtcgcga  | gctctgctga | ttttccatac | aagttcgata |
| 139141 | tacaatgaca | ggtgaattag  | ctttttgata  | aacgcactaa | ggatcctgat | ttctttctct |
| 139201 | tccttatatt | attcttcatt  | ttttgcaggc  | ttgcagatga | taagctgggt | ttagcttctt |
| 139261 | tggagcaata | cattattcta  | aacaagacaa  | gtttaatatg | tgcgatctct | gattctccag |
| 139321 | ctctgctcaa | cctagtgaat  | ctttatggtc  | tttgcaggag | tcttcaaaac | gagagatacc |
| 139381 | agatatccta | cagtcttgaa  | gctgagagaa  | taatcttcca | tctactaaac | gaatatgagt |
| 139441 | gggacttggg | ttccattaat  | attcatctag  | aatctctgaa | gtggcttttt | caacaagaaa |
| 139501 | gtatcagcaa | aagtttaatt  | taccagatcc  | aaaagatctc | ccggaacaac | ttaattggaa |
| 139561 | atgaagttca | caatgtatat  | ggagatggca  | gacagagatc | cctcacatat | tggtttgcaa |
| 139621 | agttgatata | agaaggagac  | aactatgccg  | caactcttct | agtcaacttg | ttgacacagc |
| 139681 | ttgcagagaa | ggaagagcaa  | gagaatgatg  | ttatctcaat | tttaaactct | atgaacacaa |
| 139741 | ttgtttctat | attcccaact  | gcctccaaca  | atztatccat | gaatggaatt | gggagtgtaa |
| 139801 | ttcatagact | cgttttctgt  | ttcagtaact  | catccttggg | aacatcggtt | agaacactcc |
| 139861 | ttctgctagt | attcaacatt  | tttaacttct  | tgcaaccggc | agtgtttatg | attgatgaat |
| 139921 | catgggatgc | tgtatcgata  | aaggtaaggc  | catctagact | tattctccac | caacattggc |
| 139981 | atgttatcaa | agagctcact  | gaatcctctt  | tgtctttagt | ttgttaaatt | ttttgagctt |
| 140041 | gcgagacact | gctataaaac  | agaaccatga  | agatatgggt | gtgattggca | ttctttcttt |
| 140101 | ggttctgtac | cactcgtcag  | atggagcact  | tgtggaagct | tcaagaaata | ttgtgtcgaa |
| 140161 | ttcgtacctg | gtatcagcaa  | tcaacactgt  | ggttgatgta | gctgtctcaa | agggccagc  |
| 140221 | attgactcag | tgtcaggatg  | aaactaacat  | cggagaggct | ctagcattca | cgttacttct |
| 140281 | ctattttttc | tcactaagaa  | ggtagcattt  | gaaattgttc | acactgatag | atcctacttc |
| 140341 | taaccgttct | gaacttcttt  | tggcctacta  | gtttgcagat | tgttctagct | ggagcagtag |
| 140401 | attggcaaac | tttctttggc  | acgtcgacca  | gcctggaaac | actaccctga | gtctgcatcc |
| 140461 | attgccataa | tttgtgcagg  | ttgatgcatt  | ttggagcacc | acaaatcaag | cttatcgcct |
| 140521 | cttattgtct | tttggagttg  | ctcactggac  | tatcagaaca | ggttgacata | aaaaaagagc |
| 140581 | aactacagtg | ttcatcgagt  | tacctaaaat  | caatgaaggc | tgttttaggt | ggtcttgat  |
| 140641 | tctgtgatga | cataagagta  | gcgacaaact  | ctgcgctttg | tctttccatg | attttaggat |
| 140701 | gggaagacat | ggaaggaaga  | acagagatgc  | ttaagaccag | ctcatggtac | aggtttattg |
| 140761 | cagaagaaat | gtcagtttcc  | ttggccatgc  | cttgttcagc | atcaagtaca | tacgtgaacc |
| 140821 | accacaagcc | ggcagtctat  | ctaaccgttg  | ccatgctaag | actcaagaac | aagccagttt |
| 140881 | ggctgagaac | tgtttttgat  | gagtcttgca  | tctctagcat | gattcaaaat | ctgaatggga |
| 140941 | taaacatcag | cagagagatt  | gtaatatatt  | ttcgagaact | tatgcaggct | gagttattga |
| 141001 | attcccagca | agtgaaccaag | ttggatcgtg  | cattccaggt | tagtaacgca | gataagttta |
| 141061 | ctcgacatag | gtttgaatac  | atcaaattga  | tttcataaaa | atctctggtc | ctgcaggaat |
| 141121 | gtagaaaaca | aatgcacagg  | aatggaactc  | gagatgagac | agttgaagaa | caagtgaac  |
| 141181 | ggaaaattcc | ctcaatccat  | gatcatagtg  | agttctgcaa | ctatcttggt | catttgatgg |
| 141241 | tatctaattc | gtttggacac  | ccaagtgaac  | gcgaaacata | caccagaag  | aagaaacaga |
| 141301 | ttcttgatga | gatggaacaa  | ttctccgagc  | taatatcaac | aagagaaggc | cgtgtaagcc |
| 141361 | ctatacaaga | agaaacaaga  | caaatgcaaa  | cagagagaat | cgtgtagaag | agcagactta |
| 141421 | agagaagctt | acaactgtta  | gtctctacat  | acagtctagt | gtttgtatag | gttcaaat   |
| 141481 | acatactaag | gtacagtttt  | ctgattctta  | accactagtt | ccattagata | ctggtaagtc |
| 141541 | catgacttcg | attctccgtc  | tctcgtacca  | agagactggg | tcttcacttc | ttcacagctc |
| 141601 | ctgagaaact | gccccttacc  | aaaagcagca  | tgaaccaaag | ggtctgtctt | catttccaca |
| 141661 | ggcttatcaa | gaaacccaat  | ctttttccaa  | gtcataaaaa | ctccagtgcc | gtcgaacctc |
| 141721 | gcttcaactc | agtcaaagac  | aattcctaca  | gttacaagat | caagcttcac | atgttttata |
| 141781 | cggagctcag | agagtaacag  | ctcaatgctc  | gtgaaatctc | ccatctttga | gtaagctaaa |
| 141841 | agtgcgatat | tggcaaaagt  | tgtattccaa  | ggaactctag | cttcttccat | ctctttaaca |
| 141901 | acataatcca | aacctttccg  | actcacaagt  | cgggcatgac | acagaagcct | gagacaccaa |
| 141961 | gcaagttcag | tcctacgggt  | tctagaagca  | gaaatgccac | gacccaaatc | atcaagtctc |
| 142021 | gagaacatga | ggttttcaat  | ataaacatta  | gctaatttcc | taactaaacc | ctcatccaaa |
| 142081 | gaaatcccaa | accttataat  | cttggttacac | gtttcctcca | tcttttcaat | tagcccaaac |
| 142141 | tctgcataag | cttcaagcat  | agacaacaac  | gtagaaggct | ccaaagtcac | cttctctgac |

|        |             |             |             |             |             |            |
|--------|-------------|-------------|-------------|-------------|-------------|------------|
| 142201 | atcaaaactct | gatacatttg  | ctccatttct  | ttaagcaacc  | ctcctcggga  | aaactcgcgt |
| 142261 | atgagtagat  | tataagtaac  | atgatcacgc  | acacaacccat | cagattccat  | tctcttaaga |
| 142321 | cacaaaacaa  | tctcatcata  | cattttccat  | ttaccatattg | cttcaatcaa  | tccatcgat  |
| 142381 | gtctccgtta  | tcggtaacag  | accatttctcc | ttcatatgat  | tcaagtagaa  | catagcttcc |
| 142441 | tcaaacttcc  | catcatcagc  | ataactatgt  | atgattgaat  | tatagatttc  | taaagacgga |
| 142501 | cttagctcat  | gatcatcaat  | catactacga  | aaagctcgaa  | ttgcttcaat  | catcgatttt |
| 142561 | tcctcacata  | aaaaccttat  | aatcctttcg  | taattgttct  | cacttattcg  | cgaaggetca |
| 142621 | agattcttcc  | acgtatcaaa  | aacctgtaat  | tgaaagaaga  | aacaaaaagt  | catcttcatg |
| 142681 | ttctgaaatt  | ttatgaaaga  | gatagataca  | gaggaggaaa  | gtacaggaag  | aatctcgtgg |
| 142741 | agtcttgagg  | actgacggag  | aaaacgaata  | acggcccaga  | aatggtcttt  | gctccaatct |
| 142801 | ccatctctct  | gaagaagccg  | tagaggacac  | gaaccggaaa  | gactgagccg  | ccgtgtcaat |
| 142861 | gaactgagaa  | accggtggtg  | gtggagaaga  | gaggtgggct  | gtgtcgcgtc  | gccattgata |
| 142921 | gacaagggca  | aagagcggcg  | gagagaagaa  | ggtctaggta  | tcgaatagga  | ggtagatgtg |
| 142981 | agaaagcttg  | agttcaaatt  | ccatggagga  | ggaggtggct  | tcttcagtag  | cgctcgtctg |
| 143041 | tggagaaatt  | gcgccgtcgt  | cagatttctcc | attacattcg  | aagctctgca  | aaaagtttga |
| 143101 | accttttcca  | gaagaatgga  | ttattttccc  | ggttctggta  | cggtttagtt  | tgatttcggt |
| 143161 | ttaagtctta  | ccaaacattt  | attcggtttg  | atcaattcgg  | tttaagttca  | agctggtaca |
| 143221 | ctcattcaac  | aaactaggca  | ttcaaacgca  | aacagaaatt  | gaaaaaagtc  | aaattcaaaa |
| 143281 | gtggtctgca  | taaaagtatt  | caaagcctaa  | gcaacagtag  | cgcttacaag  | aaccaaacta |
| 143341 | ctaacacgtc  | tttgtactag  | caagtcttca  | gaaaccattc  | atcatctcct  | acacattata |
| 143401 | caatagagtg  | gtggtctatt  | taacattgga  | gcagcaaaca  | aatggcacc   | aaaagggctc |
| 143461 | tcctttcact  | ttcttctcct  | ctctctttaa  | gtccactgga  | tactttgctg  | gtgaattcca |
| 143521 | ttcctcgtc   | acttctcttt  | tctctggcca  | gtgaccatct  | tcaggggatg  | tctcctgtcc |
| 143581 | cagtatcgaa  | ctcactctcg  | gtatgttggt  | actctcgtga  | tcctttgctt  | gttgtttag  |
| 143641 | ccttggtgat  | cttgcttcac  | tcagaaggtt  | cttttagagg  | acgtgttgct  | cctttgctgt |
| 143701 | gccccagctt  | gttgcttct   | ccaagtgat   | ctcttggttc  | tgagatgcgt  | cttctgttt  |
| 143761 | gttaactcca  | gcgcttagac  | ctgttccatc  | aaaatcgact  | tggtattac   | agagatacac |
| 143821 | aatattcatt  | ttaatgagtg  | ttatatcttg  | aagagagttt  | tggttttctg  | ctcatacaag |
| 143881 | atgtatagga  | taagtacctg  | aaactggctc  | caagttagat  | tcagaagcat  | taagattatt |
| 143941 | atttctagtg  | actagcggac  | tagaaaccag  | agatctaattg | tgagcttctg  | aaagattctg |
| 144001 | caatctccca  | aaatctcgat  | gatcgtttga  | ttctattgtc  | actgggacct  | cagcataatt |
| 144061 | gttggtgtgt  | ttgacattac  | cgctcgacctc | atttgcttga  | attaccccc   | agccaccaac |
| 144121 | aactctattg  | aattctgtcc  | ttccgatttc  | cagtgcagtc  | tgattagctg  | tattaacagt |
| 144181 | gtcaggtgca  | gtgcctggtg  | atccaaaatg  | gcttatagga  | tattccgttt  | tatttggttc |
| 144241 | gtttatgaaa  | ctgctttcct  | ccacaagcct  | tccgttggtt  | ctctctctgc  | aaacttcac  |
| 144301 | tttactttca  | gcgctgattt  | ggagggcgga  | gtctttggat  | gtttctgttg  | aacttttgat |
| 144361 | ctgatcactt  | gcacagatc   | cctcaaatac  | aacagacaca  | ggagaagcat  | aacaagagga |
| 144421 | ttcagaactc  | aaagtgtctt  | ttggtttggt  | ccccttctca  | gctacaacat  | ttgcttgcat |
| 144481 | aagttcactt  | tcattaccag  | cgagatcaac  | taaaccagtt  | ttgttcgctg  | cactgctcat |
| 144541 | atcagcattt  | gagtcacaaa  | ctacagaatc  | tacagcaggt  | agagaaactc  | tcaaggtttc |
| 144601 | tgattcaaca  | gtttgtgcat  | tccctaattg  | tgatttacct  | tcttcagctt  | tcattccgat |
| 144661 | atcttcagag  | ttaattcttag | atatcagtat  | gttctctgca  | ctgggaaatt  | ccttgaccgc |
| 144721 | aaccaaactg  | gtttggcctt  | gaggttcagt  | tttgtctcca  | gcgagaagct  | tgtctgatga |
| 144781 | agaaacctct  | gagccaatac  | ttaagccttc  | aggcttaatt  | cctaaattct  | ctgcctcagt |
| 144841 | aagtgtatct  | atttcacatt  | cttctccctt  | agatgtctca  | ggaagaaaag  | gattcacaga |
| 144901 | atgactcact  | tcaaattctt  | caaagccttt  | gattccatgc  | aaatagacat  | cagcattctc |
| 144961 | aacaaaaggc  | atatcatcag  | gaacagattt  | actggcactg  | ataacctgag  | ttgcatcagc |
| 145021 | ttttactgga  | gaagtatgga  | ctggaacatc  | ctcactgact  | atacagctag  | cttcacagg  |
| 145081 | atgagtcata  | ctagttgctt  | ctgatgaaaa  | accataggga  | cctccacat   | ctgagtaaat |
| 145141 | cacttcacgc  | ttccacgatg  | aatctgaagt  | atcctctctc  | tttccctaatg | cagatgctaa |
| 145201 | cttagattga  | gattctttcg  | ttaacttccc  | tttgctattct | gtctctaatc  | tatcatttga |
| 145261 | tatggatca   | ccaccgtcaa  | tgacctgagc  | ttcctgtgat  | gactcaatca  | cagtttcaga |
| 145321 | tgacatagag  | tgtccttcag  | tagaatgctg  | tgaccttgt   | cgattctctg  | aagctgattc |
| 145381 | aacttccaca  | ggtggaactt  | cacagctgtc  | ttgaaccact  | tcagaacttt  | tcatttcaca |
| 145441 | ggccgtagat  | gaattgttgc  | actgctgagt  | ttcacctgag  | aagttccata  | ttcatcaact |
| 145501 | atatagttga  | aataaagcag  | acacatcaca  | caaaaaacatg | aaagccaaat  | gggaataaaa |
| 145561 | ccgagcaatg  | tgacaaacag  | atgagtcagt  | gaactaaata  | gtttcccttt  | gaactatact |
| 145621 | ctacaggttt  | gagattctat  | tacttgatga  | agaaaaaccta | tcaaacacat  | tagcatcgga |
| 145681 | aggttaactca | ccgggattct  | cagtaccctt  | tgccgggaag  | ttttagactg  | tctcttccct |
| 145741 | gaaagaatca  | gatctcgaaa  | actcacaac   | agcatcagta  | aacacatcct  | cttcagaaac |

|        |             |             |             |             |             |            |
|--------|-------------|-------------|-------------|-------------|-------------|------------|
| 145801 | atccccaatt  | ctctcattag  | cagctttttc  | gacaactggt  | ggagcagatt  | tttcgacaac |
| 145861 | tgttggaact  | aacctcatca  | ttaagcatat  | attataacat  | tagaatcaag  | gaaagaaaga |
| 145921 | aactttatcc  | atccaaagca  | caaattgttc  | ttacttgggg  | ttggtggttt  | ttgctcatca |
| 145981 | tccaaagagt  | gttcttccgg  | caaatacaaga | ttctctttct  | tcatttcaga  | gtcaaagatc |
| 146041 | tcaaatacct  | tgatggttcc  | acagattttc  | ttgtgagcac  | gacggttttt  | agcactagga |
| 146101 | tgtggatttg  | aataactcca  | accacattta  | gtacagacat  | ggttcttacc  | tcctcctata |
| 146161 | taacaagggt  | tcacaaaatc  | ctcagtgtcc  | atattctcaa  | aaattgatat  | tttttctaac |
| 146221 | aaagactttt  | ctaaagatta  | aaaaaaaaata | aaaaaattca  | gaaagcgaaa  | ccagtcgtaa |
| 146281 | tctgaagaaa  | cattaatcaa  | atagaccatt  | acaagacaaa  | aaggaagaaa  | ccattattgc |
| 146341 | tacaaaagtt  | acacacaaaa  | aaaaaacaca  | tgaagaaatc  | attctaacta  | gacccgacaa |
| 146401 | gagattaaca  | cacaagtaaa  | aaccgaacta  | gacccgataa  | tgtgacgaca  | ttggaggaag |
| 146461 | aaagatgcaa  | aattgggact  | taaagaagga  | aaccctaaag  | acattgataa  | tgattagggg |
| 146521 | agaacctgga  | gagttgctgc  | agtggctcct  | agaatccatg  | tgtgtgtgtt  | ggggtttttt |
| 146581 | ttttaggttt  | ttagagaagg  | aaggagagaa  | gtagtaacag  | tttcagtttt  | tggggagitt |
| 146641 | taatttaaaa  | gcaatgaatg  | tgagagagag  | agagattttg  | gaaaacgaag  | aagcgaagca |
| 146701 | aaaagcccac  | tactacaaac  | aacactcact  | taaccaaaact | aaacgacgat  | ctggtgggtg |
| 146761 | gggcccata   | ttatattagt  | tagtagatac  | attcgtatat  | ttgtacggat  | tattatcatt |
| 146821 | ggctcattgc  | taattctcat  | gaccaacaaa  | attcctttta  | tcatatcatt  | tggtgacttt |
| 146881 | tgtttggtac  | caactgattg  | ttgttaccat  | tatctcacta  | aacaaaatcc  | aacaaattaa |
| 146941 | taactgattt  | ttaggattct  | ttctaagatc  | ttgagtaata  | gatattcgga  | tcccgtgaat |
| 147001 | ggaattataa  | ttgggggttag | agactattaa  | ctatcttgca  | tggaaactct  | ctccgtactt |
| 147061 | cattcccgtt  | tcagaattga  | aatatatgga  | aactcacaaa  | aaaaagcggt  | ttttaaattt |
| 147121 | tatgtttgta  | aacacgatgg  | aaacgcgata  | aacattttct  | gaattttact  | ttggaaactt |
| 147181 | ataattaaaa  | tttagaaata  | ttaagattta  | cctaattttg  | agagattcgg  | gttttaagtt |
| 147241 | ttcctcccaa  | cgaatcagat  | tttaggtgct  | ttatatatga  | attttgatga  | aactaataaa |
| 147301 | aatgattgtc  | tatatatttg  | atattaagcc  | ttttaatcct  | tatttttcag  | aatttagtta |
| 147361 | aattatttga  | tatttatgtt  | ttgaatatct  | atatacgttt  | ccaaaaattt  | tcattcctta |
| 147421 | atttaaaaaa  | aaaaattggt  | tctgttttcg  | tttctgtttc  | cgtttccatg  | taacataact |
| 147481 | attaaacttc  | tttttaattc  | ggatatgtga  | ttaatatggt  | tatctttatc  | ttcttctttt |
| 147541 | ttttgggtta  | agtgtttatc  | tttatctttg  | aggtgtttct  | gtaaatcatg  | attttaatag |
| 147601 | attttaaatc  | aagtcataat  | atattttta   | tctttttttt  | tatatgat    | gtataaatca |
| 147661 | catttcaaag  | attttaagtt  | tactattggt  | actcaattaa  | gatttttaaa  | attttaataa |
| 147721 | attttgtaaa  | ttcaatcatt  | tgaattgatt  | atttatatat  | atatataata  | tcaactgtta |
| 147781 | cacatttgta  | tattacccaa  | aaaaacaaaa  | gatatttgat  | gtcttttgta  | ctgtatgtat |
| 147841 | gatgtacata  | tcacaccacc  | tgtgttatcc  | actactcaag  | ccaaaagcta  | tttcaggctg |
| 147901 | ccgctcacgt  | ggcttgcaag  | agacottttt  | agacottacc  | ggccctagct  | agctatagcc |
| 147961 | ttcaacaaca  | aaacaaatgg  | aatttttggtg | gttgaaaaca  | atcgtcttcc  | ttttttctg  |
| 148021 | ttctctttta  | ttgttcatga  | acatttggtt  | ttaccctctg  | atcaatcaat  | gatgatcgac |
| 148081 | cttttataat  | ttgtaccaga  | aaagggttta  | aaaagagaga  | cataatgata  | aatcactatg |
| 148141 | attacaaaag  | gtcgacagta  | attacttttt  | aaaaattata  | aaattgacag  | aaacgtgaga |
| 148201 | tgtcaaatct  | gtgagattca  | tttactgaag  | agagtaaggt  | taagtttgga  | ttgcaatgag |
| 148261 | atttatacac  | aaataataat  | gcttacaagc  | aaatcatcct  | taagttttgt  | cctcttctca |
| 148321 | tgatgatgat  | actgttgctt  | ccgacaactt  | tcttggtcca  | gacgcagcca  | gtagctcgta |
| 148381 | atcctgtata  | accagtaaat  | tctgacttta  | gcaattttct  | tacataaccg  | gaacagtata |
| 148441 | atagtgaagc  | aaaatcaggt  | aaaccgaccg  | gttattggcg  | atatattcca  | acaagaaaca |
| 148501 | gagaacaagg  | ttactgggta  | actatttgaa  | tggcaagctt  | gtgtttacct  | gaacaataga |
| 148561 | ctgagagcag  | aatttgccag  | agaggacagc  | gccttccatg  | gaagctaagt  | acttctgttt |
| 148621 | tgtgtaatct  | ccagctaagt  | agaatccttc  | aataggtgat  | ctttgtagag  | gacgacatgg |
| 148681 | ttcacagtgt  | gggatgggtc  | tgtacacaga  | tctgatcatg  | caacaataga  | gaaagatggt |
| 148741 | gaattttatca | atgtaaaagc  | tgggtccctca | tttgaagcta  | aataaatggt  | acaacttcac |
| 148801 | taaccttgga  | gtcttaacga  | catggtactt  | cagaatttta  | gctttgcttt  | ggtcagctga |
| 148861 | gatttcatca  | gggaagagtt  | tctcaagttc  | tttcattggt  | gcattctatga | gttcagaatc |
| 148921 | agtccgtgat  | atccattcct  | ctgctggtgc  | aaatactagc  | tccagcattg  | accggttagg |
| 148981 | atcgtaatat  | tcctacagtt  | tatcatagaa  | agaaaacgct  | ttgttgaaatc | agattcgga  |
| 149041 | tcaagataag  | ccatcaaaaa  | ttatgagaag  | atccacagag  | caccaattta  | tgatagataa |
| 149101 | acaagtggag  | gaacacgttt  | agaaaaacaa  | gccgcgttct  | taccttacaa  | gttaaggaca |
| 149161 | tgctggcata  | cacgctcaga  | aggttacttc  | tgcaaaaaac  | aacaaaacaa  | gattgttgaa |
| 149221 | tataacaaca  | atgtttaacc  | aagaacaagc  | cttaactggt  | gctgattcaa  | gacaaaacac |
| 149281 | ttgtattctt  | tttttccaac  | actgtatcca  | actaagtatt  | ctataagaca  | taattcctca |
| 149341 | aaactgcata  | aataagaaat  | tcacctgcta  | aagagtaggt  | gatcatatgt  | gttcttcagt |

|        |            |             |             |            |             |             |
|--------|------------|-------------|-------------|------------|-------------|-------------|
| 149401 | tttcgatcaa | acctgcaata  | ttagttcaca  | gcagttaaga | cctgcatgta  | atctcgattc  |
| 149461 | tcacataatg | gccaaaagaa  | aacaagggag  | ataacggttt | cactaaccat  | atatgaacat  |
| 149521 | taataactgg | tactccaact  | aatttatcca  | atttcttgaa | gtacggtatt  | tctttccagg  |
| 149581 | gatctggtaa | aaggagcttc  | aggatatcga  | ctacaagaaa | aacataaaca  | acatattaat  |
| 149641 | aagcaggata | ccagatgaat  | tgttaaacc   | acaagacagc | atggtagtaa  | acctggagcg  |
| 149701 | gcaaacacat | aagcgtctcc  | ttcgacagtg  | cttccattag | tgagtaagaa  | actcttaacc  |
| 149761 | gtgccatcgt | cattgagctc  | aattttcttt  | atcctagaat | taagttgcac  | ttccccacct  |
| 149821 | agtgatcgaa | tatgatccac  | tactggcata  | caaagccttt | ccggaggatt  | accatccaag  |
| 149881 | aatgccatct | tggaaccatg  | tttttctgt   | caatgtagtt | catattagtt  | tgcatttgca  |
| 149941 | aattcacaat | atcctaacca  | tctgttgac   | cttatgacac | acaataagtt  | tcaaatgag   |
| 150001 | aaacatctga | ttattgggat  | gaggtagtag  | aagttaatca | acatcaaact  | caagtattgt  |
| 150061 | ttgggtaaaa | aaattctatt  | atagttttca  | tgctgaccat | gtgaatggta  | actatgattg  |
| 150121 | ccagtggat  | aaagattcac  | aaaaagacag  | gcaaaaggaa | gaacaaagag  | aaataaaggg  |
| 150181 | ctagagtgtc | aaacctgaag  | aaaccggttc  | aaagctatca | aaatgcattg  | cattgacagt  |
| 150241 | tcacagggt  | ttataaagtt  | tagcgccttt  | gacatggcaa | taaacacctc  | gtcggtcacg  |
| 150301 | cgctcaggta | ctccctggac  | aagtatacaa  | ttaatcagaa | tgtattatta  | tctgtcgtagt |
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|        |             |            |             |             |             |             |
|--------|-------------|------------|-------------|-------------|-------------|-------------|
| 174601 | caacgaaatg  | aagatatatt | gtaaatatgt  | tatgagagat  | gtctagttaa  | ttagatacta  |
| 174661 | taccacttga  | cgaggaaaaa | ttggccggtg  | ggtgactcca  | caaggtgatc  | tgtcttggaa  |
| 174721 | catgaactca  | ctcccgccaa | ctgcttaaac  | accgactctg  | gaagattttc  | ataatccaag  |
| 174781 | tcgatgaagc  | tgggttgccc | attctcctgc  | ctagagttga  | aatgatcatc  | accctcctta  |
| 174841 | gagttgagat  | ccaagtagca | caagtagttg  | cctccgtaac  | ttggaatgta  | gaacctttga  |
| 174901 | tctctcttgg  | agaacatgag | gctagataaa  | gggtttatac  | actgagacat  | gaatttcattg |
| 174961 | ttgatccatt  | tagagctgcc | aaaaggcctg  | caaagactaa  | cccagatccc  | cgataatttg  |
| 175021 | acacccacta  | cccaatcttt | atcttgaaca  | ggtatagagg  | acatggctag  | gttatggatt  |
| 175081 | ttggtaccgg  | tgggtacaga | aggtaaata   | atgggtcaagt | tttctagttt  | gggattggag  |
| 175141 | gtctcataag  | tgatcacagg | ttgatggctg  | ctgcttctgt  | acgaaagata  | gaattttaat  |
| 175201 | ccatcacgta  | aaaatccgac | agtcactgcc  | tcaatgacct  | ccttctcgag  | tttcttgccc  |
| 175261 | ttaatatgta  | cttttggtgc | ctttcccttt  | gaagaatcgt  | cgctgtatac  | tattacgcga  |
| 175321 | ccatccgaag  | agaatttttg | gatgttagtg  | atgtattcaa  | tcaataaaaa  | cgggtaggct  |
| 175381 | ggttcagacg  | acaagagttg | agtcacttta  | gtctcgtcat  | ccgaatccca  | cccgttctgt  |
| 175441 | tgagaagttg  | tagatgagaa | catacgaaca  | acatttttgt  | gtctctgcca  | tatatatggt  |
| 175501 | caagtagtca  | gagacgatat | caataacaag  | aagaagttaa  | agaaaaatga  | attttattact |
| 175561 | tagaagctta  | agaggaagtt | tttgagaca   | gaggggttaa  | agactcggct  | gattataagc  |
| 175621 | tgtgccattg  | ttgaacttct | ttaagtgttt  | tctgtctctg  | tataatctgt  | gtcattattg  |
| 175681 | tacttaatac  | taataagaat | atccttgctc  | agcaagtaca  | agacataaat  | gagaatattt  |
| 175741 | agaaattcca  | taaatagctc | gttaaaatct  | tattataatt  | tttgtttttt  | tctgtggaat  |
| 175801 | ttgttggtca  | atatttggtc | ccaaaaattg  | ttttattcat  | aaaatctaaa  | atcatttccct |
| 175861 | aaaatcaatg  | catacaaat  | actctatatt  | ctaccctttt  | ttttttaatt  | tttcgatatg  |
| 175921 | tttttaattg  | aaacagaaaa | cttttcatgc  | aaccacgttc  | gatttttttt  | ttttttcttt  |
| 175981 | agcttaattg  | gcttatgggc | ttctacgttc  | tagaaatttc  | ctactacaca  | aaatatcttt  |
| 176041 | cgttttatcc  | aaattccaaa | acagtaataa  | gattataaga  | acaataaata  | tcttatccag  |
| 176101 | ttaactaacg  | acgtatatcc | caattattgt  | gaacatcacc  | accgtcagat  | cacgccctta  |
| 176161 | tcattcatga  | ccgtcagatc | ctcatatttt  | acatcacacg  | tggccgtgac  | tctttaccgg  |
| 176221 | ataaccggat  | tgtctcttct | ttaaaaccgt  | gcccaagcga  | ctcgtgagtg  | agactcgtc   |
| 176281 | taagaccag   | tttgactcgt | tgatcaacga  | aaggtaacga  | caaaactctg  | atttccgatt  |
| 176341 | tcattactat  | gaatcgattc | gaatttctga  | gtttctgact  | ttgtttcagt  | gtgagtttga  |
| 176401 | ggtgaaagat  | gacggcgacg | atagatcgga  | ggttatcaac  | gctgaatcca  | aacgcgccgg  |
| 176461 | tgtttgatcc  | gggtgaattt | cgtgaggtgg  | aggatttttc  | accgaaatgg  | tgggatctag  |
| 176521 | taacgacttc  | gaaatggttc | cgtgactttt  | ggctcagtgc  | taactctgag  | aatgagttcc  |
| 176581 | tcggcgccga  | cgatttctca | gttatggaag  | aagagttcga  | ggagatgatc  | gcacgtctct  |
| 176641 | atggtggatc  | catggctgat | acagttacag  | gtaacgattt  | gtttactgtt  | ttgaaattag  |
| 176701 | ttgagattta  | gggattcgaa | acattcagat  | ctgaggattt  | ttgtgtgttt  | taatggcaga  |
| 176761 | agcagatgtg  | gctagttatt | tgaagatgct  | tttgaacata  | gcggagtcta  | cgaaagagaa  |
| 176821 | gattttataga | tcgaaggttt | cgtcttggtc  | accaaagtat  | aatcagaaga  | agtacatgaa  |
| 176881 | tccgaacttt  | aattgtcgcc | ggaatcatca  | tatctatcag  | ccacggtgaa  | gcttctagaa  |
| 176941 | ggaacaaagc  | tcttcttctt | cttcttttca  | gatgataatc  | agagtcgtgt  | ctgtgtttat  |
| 177001 | ggctgaatct  | gatcttttct | gctttcttgt  | tttttgtaat  | tctgtgaata  | ttctactttt  |
| 177061 | ctataataac  | atcactttat | gttatgagca  | taaccaaat   | gaaatcgaac  | caggtcgaat  |
| 177121 | cgaaatgttt  | gggtcgggtt | aaaatgggat  | tgtatcattt  | gtctttggaa  | accaaactta  |
| 177181 | acaacaatat  | tgaaacccgt | attaaacaca  | aaccaaaccc  | aaaatgggta  | ttaaacacaa  |
| 177241 | accaaccgga  | atatggttag | agttgagcta  | aaactttacc  | atgcgcatat  | gaagataatg  |
| 177301 | atgtcataaa  | agttggaatc | caattttatt  | tggataacct  | ttaatttggg  | tgatcaaaca  |
| 177361 | ataatttttt  | ttatattaat | tactatgtta  | tgtaaatcat  | tcaaaggagc  | acttgattat  |
| 177421 | aatttttga   | caactccttt | gttttgctct  | cattcaaaga  | aaaaagggat  | taacaattgg  |
| 177481 | tgatatttagc | gttttacgaa | aagaaaaaaa  | aacatgttaa  | gagcaaatgt  | tgtcgtctct  |
| 177541 | ttggttatat  | ttgcagctct | catgcaatgt  | gtggcagtg   | gggtatgttt  | tcttttactc  |
| 177601 | tttagtacta  | atactatatt | gttatattgt  | tttctgaaat  | tttgtaaatt  | taacaatcat  |
| 177661 | ttttttgggg  | gttaaaagta | ggatccgaaa  | agatgaatgg  | aaaagaaaac  | attacgccat  |
| 177721 | ggatatacag  | tatgaagcag | ccggtgtcgt  | gtaatagaga  | acattcggaa  | attggaatat  |
| 177781 | gtcttttcagg | tattgatgat | gatattcaaa  | acgatggaaa  | atgctggaaa  | ttttgcttga  |
| 177841 | tgggttcgaa  | aagcggaggt | tataatgcag  | acaaataatc  | atcccagaaa  | ttatacaagt  |
| 177901 | ctaaaatata  | acgcatgaga | caaaaggatt  | attttgttgt  | ctaaataaca  | gtgcaaat    |
| 177961 | catgtttctt  | cccttctttt | ctgtatcaaa  | tttttgaaaa  | atctataaca  | agaatggatc  |
| 178021 | gcattttttac | cacctaaaca | aaaaaaaatc  | gaaaatttca  | taaaaaatata | ataatcaaaa  |
| 178081 | tataccacct  | aaacgtttgt | atgttttaagt | ctctcttttt  | tttttttttt  | ttgggaactg  |
| 178141 | atggttaaat  | ggtaggtcta | taccaattcc  | aacacatgcc  | aaattaattc  | gaaaaatcaaa |

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| 178201 | caaaaaccaa  | accgatctaa  | gttttggttt  | agagttcaaa  | caagaatatt  | acgacaacgg  |
| 178261 | aatactgtat  | gtttgatata  | tttcacaaag  | agatacagag  | cattgtttat  | attgtacaag  |
| 178321 | tagtaggcgt  | gagcctcaag  | attatgcaat  | aagtataatt  | tcctaaacta  | gtgaattgga  |
| 178381 | atattgagga  | atgaatgagc  | atctaatacat | atctctctag  | ctcgacagaa  | taaaccacaa  |
| 178441 | acgttttatct | aaataagtca  | tgtatatctt  | gtaataatgt  | agtcaagggt  | ggaatccaat  |
| 178501 | cttttttgaa  | acatgttttt  | aatttggttg  | actaaatata  | ttgtattcct  | tactaattta  |
| 178561 | ttatgtaaga  | taatgttaat  | tcgaaggatc  | ccttgaatat  | agttacaatt  | cttactataa  |
| 178621 | atacgaaaca  | actcctcctt  | cattctcatt  | gcaatacaaa  | aatatcaaaa  | gttcttaata  |
| 178681 | ttttaattaa  | caaagaaaaa  | agagagaatg  | gttagaacia  | atgttgtctc  | ttttgtttta  |
| 178741 | tttgctgcta  | tagtgctatg  | tataggata   | tttttttttag | tactaaagct  | ttaacctttt  |
| 178801 | tcatgaagtt  | ttcatgttg   | gaaattaatt  | tacatgatata | ttttcttatt  | gaatgtagga  |
| 178861 | tccattcaaa  | tagatggaca  | aaaacacacc  | gcaccgtgga  | tacctgaaga  | caattcgata  |
| 178921 | tggtgtaaag  | aacatccgag  | tggtggaaga  | tgtcttccaa  | acatcgatga  | tagtgctgag  |
| 178981 | aagggtggga  | aatgctggaa  | gttttgatt   | gaagggtgtg  | aaacaggagg  | tttttgcaaa  |
| 179041 | ctttttggac  | ataaacatat  | atgtcattgc  | aattgttccg  | gttaatatgc  | atcatgcaaa  |
| 179101 | attaataagg  | ctcctacgta  | cgatacaagg  | aaaaatttgt  | ttgaaaatat  | aattaataaa  |
| 179161 | ggttcaacta  | cattgttcaa  | aatgaataa   | cagattgcat  | aaattttata  | tctcttctct  |
| 179221 | tcttctcact  | tctcaatatc  | aacttaaaaa  | ataaaaatca  | ataatcacat  | tttgaacat   |
| 179281 | ttatacaaat  | ataaatgaat  | aactcgtatg  | tatgtatata  | tatacttaaa  | tttctgcata  |
| 179341 | tgtatagtat  | tggtccaatt  | agtgttttaa  | gacacctgga  | ttattcttta  | tataaaattt  |
| 179401 | acgaatttg   | taattttatat | ctattatgta  | tgtagtactc  | cgtttttttt  | tgtaaacgc   |
| 179461 | acattagtta  | taaaaaaact  | ccattggaga  | tttcttttct  | acatatgtac  | aacatggat   |
| 179521 | tttttctaca  | tatgtacaaa  | gcttcaattt  | aaattgagac  | ggtataatca  | gataattatt  |
| 179581 | ccaatatgta  | acatgttaac  | tcaagaatac  | atattttact  | ataagaacag  | ttccattggt  |
| 179641 | agtatcttat  | taagggtttt  | aacctctctg  | agatgttcta  | aagtttcaaa  | agattaatta  |
| 179701 | ataataattt  | tttcaaaatt  | aaaaaaaaga  | gggaaggggt  | cattattttac | catttataac  |
| 179761 | ttgatcacta  | gccattagga  | tattgctatt  | gcatgatcaa  | catttattta  | gttgcaata   |
| 179821 | gtgattaatt  | ttaaaattga  | ctaaatcatc  | tattgatgac  | agaacatggg  | tcacaatcat  |
| 179881 | gtagttgcag  | attgcaatcg  | acgtgggtca  | caatctttgc  | agttttatcc  | caaaaacaaa  |
| 179941 | ataagacact  | ctttaatctt  | caagttaaga  | cacttaaatg  | tcgtagactg  | ttacattttac |
| 180001 | tgatcaatcg  | attattttcag | agaacaagaa  | atggaatata  | ctgatatgat  | taggattctg  |
| 180061 | tgattggaag  | gaatgtccag  | ctcaaccatc  | acaagtaacg  | atctaatacg  | tcctaaaaca  |
| 180121 | acgtttaatg  | ctttataaac  | taccaagaaa  | aatacaacaa  | tacacgagat  | taagaaatgt  |
| 180181 | tataatgtaa  | ttgataacta  | atgacatcag  | aataaaatgg  | tgcgtccaag  | attgtcgttg  |
| 180241 | tttgagcgcc  | ttttcttcaa  | aaagtcaatg  | gaacgaaact  | ccagacgtgc  | atgggtcaac  |
| 180301 | aaaacaatgt  | cactaaccta  | ataaaataaaa | caagttttatc | gatcaaatta  | attatctgcg  |
| 180361 | taaaaccaa   | ccaaaacatt  | tgtttctctg  | ttgtttgtct  | caaactcaaa  | tggttgaccg  |
| 180421 | tcctaccgat  | gtggtcgtag  | aagtcgggtc  | ttccggcaga  | actattttcc  | gaccggacga  |
| 180481 | gactccgact  | ccagaacctc  | ggagaccaac  | acaattgccg  | ccagttcctg  | caccggagaa  |
| 180541 | aaaactgacc  | ctttttgcct  | taagactcgc  | tgttcttgag  | aagggtttttg | agattccaac  |
| 180601 | attcatgttc  | attatttagg  | agtccttttc  | ttgagtttta  | aattgtgttc  | ttaaattctta |
| 180661 | atcacagatt  | gcttcagggt  | tgggatcttt  | aggtttcgtg  | tgggccacgg  | ttgttcttct  |
| 180721 | tggtggattc  | gctggaagtt  | tagagataac  | agatttctgg  | ttgttactg   | tgattcttgt  |
| 180781 | tattgaagga  | gctaggcttt  | tcagtagaag  | ccacgagctt  | gaactgcagc  | atcagtctaa  |
| 180841 | gtacacaatc  | tctggaatca  | acatcttccg  | gttcttctgc  | aaacaaatta  | accaaattat  |
| 180901 | tcaccagggtg | gctcacattg  | ccggagacga  | caatagacca  | tcggttcgag  | aaacgagaa   |
| 180961 | cgtacaaagg  | aattcgggac  | acatcacgcg  | gacaaggaca  | tggaataagct | cagatgttcc  |
| 181021 | tatgttgcc   | tacacaggat  | gggtttttgt  | ttcaagaaac  | gtgagtagaa  | tcttctattg  |
| 181081 | gctccagatt  | gcttctgctt  | tcgccagcat  | ttttatctcc  | acgatccaac  | tcatcaaaaca |
| 181141 | agactatgga  | ggcaacgact  | tgaaccccaa  | aagcaccaat  | cttcacgcag  | ctttgactct  |
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| 181261 | atatatgatt  | agtgttatcc  | acattcttga  | gaaagtgaat  | gaagaatgcg  | gtcttgagag  |
| 181321 | atttggtacg  | ggatcgggtg  | gaagattctt  | ctatgatgcc  | tactcaagat  | gcctcaacgg  |
| 181381 | gagcatcttc  | gacggattga  | agatggatat  | ggtgatcttt  | gccatggagc  | tcttggtagc  |
| 181441 | gaattctctt  | gatgagcagc  | tcattggagc  | agagattctt  | tcgatattct  | caaccacga   |
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185221 agccagaggt ttaaaggcta catggtcaag ggttcatcaa gaacttatga gaagctagag  
185281 gaagaaaagt ataatatgga aaacttacta tgtatgcttc atatatacgc tctgagtgat  
185341 gaggtgaat aaagtcatca tctacggcat gtccaaataa aacaggaaca aaacaagatt



|        |            |            |            |            |            |             |
|--------|------------|------------|------------|------------|------------|-------------|
| 185401 | tcgctacctg | cagaatgaac | gatataaatt | gaaaaaaaaa | acgagaaaca | aaacatcact  |
| 185461 | taatataaaa | acacaacaaa | atctctacta | ccaattgact | ttgatacaat | tacacattaa  |
| 185521 | gaacaatcat | gaatgccaaa | taatgagggg | aaataagtaa | atgatcacca | aaaacaatga  |
| 185581 | tgatgttgcc | ttccagtga  | tagattagtt | aatcatctaa | gtaatcaact | agactaaaag  |
| 185641 | taaaaactaa | cagaggaaac | gaccttaatg | gtgttgagat | ccgttatgtt | aaaattggct  |
| 185701 | ttcttctgaa | cagctctccg | catatattgt | attgcaaat  | ttatctgaaa | gagattgaaa  |
| 185761 | gagcttaaa  | tcgtataata | gattcaatgt | ggaaaccttg | tagtatgaag | aacaaatccc  |
| 185821 | acaagaaaca | gacactacaa | atttactttt | acttacagta | aacttcggta | gtcggaaactt |
| 185881 | atacgtatct | acaagctcca | tcacaaatc  | aaccaaata  | gagaatgggc | tgtctagaac  |
| 185941 | catcgctgcg | atagagggat | cctctgctcc | gtacatcaag | ctggaaaaga | agtgttgcaa  |
| 186001 | cgaaatgatt | tcatagttca | gcagaaagag | agaaatgatt | tagcaatcaa | atcttaagtt  |
| 186061 | gcagtgggtg | acgtttgcc  | tggtgtagat | catttagaca | caggagagtc | agctaaatag  |
| 186121 | acaacaaacc | cgaccaaaga | atatttcatt | cgttcttag  | caactattct | cctctccact  |
| 186181 | ggtaaagaaa | aaggggctca | caagataagt | aaatcctcaa | ttgcttacaa | aattcagttc  |
| 186241 | tatagtaaac | acttccatac | agtttcatgc | aacactggaa | atgaaaacgc | tcttattaag  |
| 186301 | tagttcaaca | aatgaaagac | ttaaaggaac | cttgtgacag | cacccattga | acgaccccat  |
| 186361 | aagccaatca | gggagacatt | cccatccgtg | cgcaataact | caaccacagc | cttcagatca  |
| 186421 | tctttctgca | accaccaacg | tcacgtttta | cagtaataaa | agaagtgact | gctctcacia  |
| 186481 | ttcaggatta | tgacttatga | aggcagcgac | tgtgagggaa | ggaaaaatca | ttgacaacct  |
| 186541 | aatcaaggac | actcaaaggc | acctaagtct | accatgaaat | agagcatcaa | aaactctaaa  |
| 186601 | tcatttgga  | atctttcttc | agaaagataa | caataccttc | atagaccaa  | tgaagcatca  |
| 186661 | taggtgtatt | ggttatagt  | ggatagaatt | ccaataaacc | acgagacatt | caatctaaca  |
| 186721 | aatatcaatc | gagaagcaga | tatattgact | taagacagct | tgtttactcc | aaacaacgat  |
| 186781 | aagtttaggc | cataacagct | gaagggaaga | agaggaatat | tttgagaaaa | gatcaaagga  |
| 186841 | ggacatactt | cgttccaacc | caaagtga   | tgctccccgc | cagagagacc | ggatcccgaa  |
| 186901 | aagtcaagcg | tgaaaatcgt | gatgtttgaa | ggaagtaata | cgatcgagc  | ttcactggca  |
| 186961 | tcagctctac | atccactgaa | taagaatgaa | tccattaatg | aatagtatac | taaaagaaac  |
| 187021 | attaagctat | tatgataatt | ggaaaacttt | agtaatgttg | gcaaccatat | cagttgtttc  |
| 187081 | atttcaatgc | atgggtgtca | tagtatccta | ccagctattg | catcgattga | aggatgagtt  |
| 187141 | aactagttta | tttcaccagt | acagctcaaa | tcacgtttta | ttaaaataaa | agttacgatt  |
| 187201 | acctgttgcc | atggcagtat | attacacaag | gtagaggcct | atcttcagga | cgctcaactg  |
| 187261 | gcatgtaatg | actacactga | aggatatctc | ctctgatgtt | tttaacctgt | cacaatataa  |
| 187321 | gttcttctat | agtcttaggt | gaacaaagca | caactaaaa  | cttgagatcc | taaaggcagt  |
| 187381 | ccaaggctgg | aaaataagga | actcacgctg | atcaacagtg | aacaactgat | gaaatctaca  |
| 187441 | ttgacattga | atcacacat  | gtttgcttgg | attctctagt | caggagttca | caacaacaac  |
| 187501 | agaagaaaaa | aagctttacc | tctaaatctt | tcctctggta | ccatctccct | ttaagcaaga  |
| 187561 | actcttggtc | caagagatca | tgttctggat | tgtattcagc | tctacatcaa | aacaccagtt  |
| 187621 | atattcaacc | gtagatgaaa | caaactaatt | aaaacaaatt | ggatttgaaa | gaggaacagg  |
| 187681 | gttttcttga | ggaaatgcaa | ccctaaatcc | tagtatatat | tacttcatct | atataaaaat  |
| 187741 | ccaaaatcaa | ctcaagaaca | agaacccaaa | tttcaaaact | caaatctaaa | aatctaaact  |
| 187801 | ttgtgtgaaa | cccaattcta | caacctagta | aagagaaata | gaaagatgaa | actgaaaact  |
| 187861 | aaattccaga | atcagtaagt | aatttttttc | aattttctga | gagaatcatc | accttgagg   |
| 187921 | tcgaatgacg | aagtttaaca | gctgctccat | tagaaaaaaa | tcaaacaaat | caccttcttc  |
| 187981 | ttcttctcat | tcttccatat | ttctcacaaa | tagtcaaaaa | tcgaataaaa | cctaaccaac  |
| 188041 | gaaagagatt | cagatagaac | aagaaatgta | actaaaaaaa | ccctaaatca | aaagatcgag  |
| 188101 | ctgttccaga | agaaagacag | tgagatcgaa | gaaagaaaaa | cacagagaaa | gagaagaaaa  |
| 188161 | taaagcaag  | taatagaaaa | acggcttttt | cggtgttgaa | gcctgaaact | gtttttatat  |
| 188221 | ttaaaaatat | ataaacaac  | tttataaatt | agccccacat | ttttgcccgt | ttttacattt  |
| 188281 | aacgtcttca | catttcatta | tggaatttaa | tttaattggt | ttgtcatgta | taatcattaa  |
| 188341 | tcattattac | taattccaaa | gttttttcag | tgaaagctga | cattgaccac | agtctcttaa  |
| 188401 | aaaatttcga | aaaaaaactc | aaaaattcaa | tttaaggttt | ttagtggaga | tcgtgcacgt  |
| 188461 | taattgtcgt | ttataggcta | ttgttttaat | tatttttaaa | tatatacgag | gtaattaaaga |
| 188521 | gattaattaa | acttaaacad | atgaggttaa | ttattacaag | tactaataaa | gctgtaatgt  |
| 188581 | ggagtttgga | atcttcgaca | acaaagtga  | catctggcac | agagattgtc | acagcacgaa  |
| 188641 | agattttttt | gtcgttcttg | taggatttgc | tggcacgtgt | ggaatagaaa | acacacgagt  |
| 188701 | gaaaccatcg | tcggtctttg | tagcccatca | tttatacttc | tattgggctg | gacttaagcc  |
| 188761 | cataagtaag | catctctgtt | acaagaaaac | gggaaacaga | tctgaaccgt | taataatatt  |
| 188821 | agaaaggatc | tagaccgttg | atctatttat | ctgctgacag | attcgtacct | tcgcgaatat  |
| 188881 | caataccaaa | ccaatagaaa | tattcgttcg | ctgtcttctt | cctcttcctc | ctctcaaatc  |
| 188941 | ggctacagcc | attggaaaag | ctaaagcctt | ttcgtaattt | ctggaagttt | ctgcagtcgg  |

|        |             |             |             |             |             |             |
|--------|-------------|-------------|-------------|-------------|-------------|-------------|
| 189001 | ttttcacggt  | ttcgtagatt  | gaggtggatt  | tgtgattctg  | ggtcagaagt  | aagatagtgg  |
| 189061 | aatataaatt  | catggattcg  | gatcaaggaa  | agctttttgt  | cgggtggtatt | tcatgggaaa  |
| 189121 | ctgatgaaga  | taagctgaga  | gaacatttca  | ccaactatgg  | agaggtttct  | caggctattg  |
| 189181 | tgatgagaga  | caagctcaca  | ggtcgacct   | ggggttttgg  | gttcgtttatc | ttctcggatc  |
| 189241 | cttctgttct  | cgatagggtt  | cttcaagaga  | aacacagcat  | tgataccaga  | gaggttatta  |
| 189301 | ttgttctctt  | atagctccat  | ttctctaatt  | gtgttaaagt  | tttatccttt  | ttgcgttttg  |
| 189361 | ctgtgttgat  | tgagaacgag  | agtaaataata | gaattttgtt  | tggttggcaa  | attcgcctta  |
| 189421 | gtgtttctta  | gattctagga  | ttggttttta  | cttgataaag  | aggattataa  | gggtactcga  |
| 189481 | tatatgttaa  | tcgtacactc  | tatgaagtga  | ttgagtatag  | tattagaaaa  | gagagcttgg  |
| 189541 | tttggtttat  | taggataagg  | aaaaacagat  | gtatatattt  | tctgttgctg  | tatgttctcg  |
| 189601 | atttgggtaa  | agtatgattc  | ttggaagttt  | attatgagct  | ttattgattt  | tggttaatgt  |
| 189661 | ttaggttgat  | gtgaagagag  | ccatgtcaag  | agaggagcag  | caagtctctg  | gaagaactgg  |
| 189721 | gaatcttaat  | acatctagaa  | gttctggagg  | tgatgcttac  | aataaaacca  | agaagatctt  |
| 189781 | tgttgagggc  | ttgccacct   | ctttgactga  | tgaagagttt  | cgccagtact  | ttgaagttta  |
| 189841 | tggccctgtg  | actgatgttg  | caatcatgta  | tgaccaggct  | accaaccgtc  | ctcgtgggtt  |
| 189901 | tggatttggt  | tccttcgact  | ctgaagatgc  | ggtagacagt  | gttttgcaca  | agactttcca  |
| 189961 | tgatttgagc  | ggtaaacaag  | ttgaagtaaa  | gcgtgctctt  | cctaaagatg  | ccaatcctgg  |
| 190021 | aggtgggtga  | cgatcaatgg  | gtgggtgggt  | ctctgggtgt  | taccagggtt  | atgggtggcaa |
| 190081 | tgaaagcagt  | tatgatggac  | gtatggattc  | caatagggtt  | ttgcagcatc  | aaagtgttgg  |
| 190141 | aaatgggtta  | ccatcttatg  | gttcttctgg  | ttatggcgct  | ggctatggaa  | atggtagtaa  |
| 190201 | tgggtgccgg  | tatggtgctt  | atggagggtta | cactggttct  | gctggagggt  | atggcgctgg  |
| 190261 | tgctactgct  | ggatatggag  | caacgaacat  | tccagggtgt  | ggctatggaa  | gtagtactgg  |
| 190321 | agttgctccg  | agaaactcat  | gggacactcc  | agcttctagt  | ggttatggga  | accagggtta  |
| 190381 | tgggagtggt  | gctgctcata  | gtggatatgg  | agttcctggt  | gcagctcctc  | ctacgcagtc  |
| 190441 | accatctggc  | tatagtaacc  | aaggctacgg  | ttatggaggg  | tacagtggaa  | gtgattctgg  |
| 190501 | ttatggaaat  | caagctgcac  | atggtgtggt  | tggaggcgct  | cctagtgggt  | gcggttcaaa  |
| 190561 | caaccctggt  | agtgggtggc  | acatgggagg  | tggttatggt  | gatggatctt  | ggcgatctga  |
| 190621 | cccgtcacaa  | ggttatgggt  | gtgggtacaa  | tgatggtcag  | ggtcgacaa   | gccagtagtg  |
| 190681 | actgtgtaag  | gggattatga  | ccgccctggt  | ttctggatcc  | ttgtcaagaa  | gaatttagct  |
| 190741 | caaatacaag  | gttcacacac  | ttcctaacgg  | gttggaactc  | ttgaatctct  | ttataagcat  |
| 190801 | gtgctatcta  | ttacaataag  | tcacttctat  | taagttattt  | ttcggttgag  | tgtacttttg  |
| 190861 | agttttggca  | gagttattat  | aactacaggc  | tttgctgttt  | tcgtattatg  | tttgtcttcc  |
| 190921 | tagtattctt  | gccggattgt  | ttgttttgat  | tgtgttattt  | tgttttggcc  | ctgatggata  |
| 190981 | taacttaagc  | aggggaataat | gcttcagggt  | acttgtaag   | aaagcagatg  | gtgagagcag  |
| 191041 | aactcgatgg  | aggtgagagt  | caaattgctg  | aatgtatggt  | ttgagtagaa  | agtagaggta  |
| 191101 | gttggttaacg | ttagtgttac  | cattaagaag  | aagggtgtag  | aaatagttag  | aggtagcttt  |
| 191161 | gagaaaaagg  | cataatcatt  | ttgcgtcgtg  | tgtttgtaca  | ggacttatca  | agggctgctt  |
| 191221 | gagttcttag  | gtggggcaac  | gactcatcga  | ggttgaattc  | aagggtctgt  | cctactccga  |
| 191281 | gttgaggtaa  | tcacttgaag  | aacgaagagg  | caagggtgta  | tcagtatgtg  | agctactagg  |
| 191341 | ttctttttgtg | aggggtgaga  | ttgaaacaaa  | catagatagg  | cacacactgt  | gatagcacaa  |
| 191401 | ggcagagcca  | cattgttaaa  | atatcttttg  | ggattacggg  | gtttgatccg  | taatgatgga  |
| 191461 | tattagcata  | ccaaattctc  | ataattatag  | atagaaacta  | gtggaaactc  | aacagtacaa  |
| 191521 | agcttatctt  | gagctgtgaa  | actcaaagtt  | acaaatacgt  | gaaagcta    | ttatatttatt |
| 191581 | cagaagtagt  | tgctttaacc  | aacttgttta  | cgtgagacat  | ccatgcaatg  | caactacaat  |
| 191641 | cttcttctca  | tttagctcag  | tgggtctcaa  | accagccaac  | accaaagccc  | cactctttac  |
| 191701 | cttttccaat  | gccgctccca  | ataccaccac  | ctttgcctat  | tccgcccga   | aagccccatc  |
| 191761 | ctttaccttt  | tccaatgccg  | cctccaatcc  | caccaccttt  | gccgattcca  | ccaccaaaagc |
| 191821 | ctccaccttt  | actaatgcc   | cctccaaaac  | caccgccttt  | gcctattccg  | tggccgaaaa  |
| 191881 | tgccctccac  | tttaccatg   | gcacctccaa  | aaccaccact  | tccccggcag  | cgattccacc  |
| 191941 | tcctttgcca  | aatcctccac  | caaaaccacc  | tccaaagccc  | tttctccgc   | ctatgatggt  |
| 192001 | cttctctctt  | tcattctttc  | caaaggtcac  | accttctctt  | gcagccacat  | aattcaccac  |
| 192061 | aaaaacattg  | aaccacaaca  | aagccaagag  | agcagctccg  | ttaacaacga  | gactccccat  |
| 192121 | ctcttttggt  | ttttttgtat  | gtattaagtt  | atgtttgttt  | ttgtataagc  | caagacgaga  |
| 192181 | ccagctccgt  | ttataaaggc  | gagtgagtag  | ccaattaatt  | acaccaacta  | ctaactgac   |
| 192241 | ccgattgttt  | taacctcaac  | tcgtaaatga  | ctttacgttt  | tcgtagatta  | cccatcacat  |
| 192301 | attcactctt  | accatgactt  | catcgacgca  | ttttctagtc  | tataagacta  | taagactaca  |
| 192361 | actccatacg  | agctttaagt  | tttcattttg  | gtacagtaag  | catataacct  | ttttttttgt  |
| 192421 | caaatacaga  | agtatataac  | tttctccaaa  | tcatttttcta | gataaagtaa  | taacattttc  |
| 192481 | gttatgttct  | tttttgaagc  | acatcatttc  | aataaatttg  | aaaaactttt  | tttctttttt  |
| 192541 | ttgattgaga  | aactctcggt  | atatggaagt  | gagagaatga  | tcagaataat  | aaactatagt  |

|        |             |             |             |             |             |             |
|--------|-------------|-------------|-------------|-------------|-------------|-------------|
| 192601 | ttgctacgtc  | aatggacaac  | gtttattatt  | ggtttttttag | tttggtggtt  | tgattctatg  |
| 192661 | tacgtagacg  | tttaattctaa | agttctctgt  | aaagcgaaac  | attattttagg | tttacaacga  |
| 192721 | atgtctaata  | ttgacaaaca  | aaagaagaag  | aatgtctaata | agatagatac  | ttaaaatgta  |
| 192781 | gataaataaa  | agtgttacag  | gaaattgatt  | taaatttgga  | tgtgtgtttc  | tcaaactctac |
| 192841 | taaaatatgg  | ttagaattaa  | gtatctacat  | caaatatgag  | taagtgaagt  | aaaagcagcc  |
| 192901 | tgattgtatt  | cgatagtcct  | actccttcct  | actagttcct  | taattttata  | gggtggactg  |
| 192961 | tgggagttta  | gtacttgata  | catattctaa  | attttagaga  | aaattatgta  | tttatctaac  |
| 193021 | tattttttaca | gcaaacattt  | ttgctaaagt  | gttcgtaatt  | gtgagagact  | gcaatgtttc  |
| 193081 | tgtgaaacaa  | caaaacagtt  | acagagtttg  | atctattcaa  | taatcatcac  | atctctcaga  |
| 193141 | ttttacttga  | gattcaattc  | ttgaaacttt  | tgtacatttc  | aagaaaaaca  | aaagagatcc  |
| 193201 | attcttgttt  | cctccatata  | gagttctcta  | cgcgtttttg  | atcaccggag  | atcgcgtttt  |
| 193261 | caagttcaga  | aatatgtctc  | taaatatatt  | aaaagacaaa  | gatgtttacca | gaaaactctc  |
| 193321 | ttcatatcaa  | aatgagagag  | gacggtaaga  | gctttttacca | gcaagaggcg  | acgaagctgc  |
| 193381 | tgaacaaaaac | acggaattgg  | agaggcacat  | actgataatt  | aacccatccc  | acgataggcc  |
| 193441 | agaactgtta  | tttcataga   | cagttttaga  | aattttaaacc | aacccaaaagt | gtaacaaaat  |
| 193501 | gaaatggtag  | tgagtctcat  | ttattacctt  | ccatgcggtt  | aactggatag  | tagggtaatc  |
| 193561 | ttttccaagt  | ttgtgcttca  | ctagcttcca  | tggccttcct  | gtgaaaacat  | tacaggacaa  |
| 193621 | tgtcagatct  | taaactccaa  | atcacaaatc  | actaaagaga  | aaacaaaaca  | atacatttca  |
| 193681 | gaactagacc  | atggtcgtta  | ccttcaacta  | ctaaaccata  | gtaagacatg  | aaaagaaaat  |
| 193741 | tgttccaagg  | agatgatgta  | agttgctcca  | acaaaacctg  | attcaacaca  | gtttttgtta  |
| 193801 | ggtccacaaa  | atccatcctt  | aagcacacag  | taagagatct  | ctgtacatat  | attgatcata  |
| 193861 | cgattatact  | aattttaagca | cattcaaatt  | ccaaattgca  | acaaggaaac  | taacagaata  |
| 193921 | taagttaaac  | aagttgttgt  | aatctagaat  | ccaattccaa  | ggatggatac  | aaacaaactg  |
| 193981 | ggaaaacaag  | tgtttgactt  | gttatataac  | caagaattca  | aaaagcattc  | aagaagatga  |
| 194041 | tagtttggtt  | caaaagacaa  | aacctttttg  | gcaacagttg  | aattaccctt  | cttccctttg  |
| 194101 | aaaatggtat  | ccatcaattt  | gtggaaaaag  | tgaccaaatg  | gtcctccata  | agcaaaagcca |
| 194161 | tacaactgca  | caaaagagat  | catcacattt  | tctccagact  | aaaaaagtat  | ataactgcaa  |
| 194221 | acatatataa  | gacaaataag  | gaacgaacca  | taaggagaag  | caatctccgg  | aactgaatcc  |
| 194281 | gtttaactcc  | agagatcttc  | agagctatag  | catcactaca  | tccagctaaa  | acctctgcag  |
| 194341 | tgatcgctcg  | aaaaaatatc  | attacgacga  | catgatcatc  | gcaagattct  | cataaactga  |
| 194401 | gacttctttg  | atcgaaatta  | acaaaccttg  | gttcgtaaag  | gatgagcttg  | aagtgaatc   |
| 194461 | agatactttc  | gccatgcgtc  | tttagcaaga  | tccgacatgg  | ctcgaagatt  | caatagcaag  |
| 194521 | attttgacaa  | gactaaaaga  | tccagatttg  | atttaagaga  | agttaaccat  | gtttcgtatt  |
| 194581 | aacaaaaaaa  | aattagatta  | tgggtaacga  | atggatttac  | tttaggccaa  | attaagaaat  |
| 194641 | atctaaatta  | ggaatatatt  | cgtagtcaa   | atatgctttg  | tcatatcttt  | ttcttcggac  |
| 194701 | cattttataa  | cacagaaatc  | atctgagtaa  | tgagaaagaa  | acctaggaaa  | ttgatcaaaa  |
| 194761 | caccacatgt  | atgtacagag  | taaagtcaaa  | taagcaaata  | gcacgaaaga  | gaatccagaa  |
| 194821 | aagcatcata  | gttggttaaca | aagagcaata  | gtatgaacac  | aacacaagag  | aaagcagcac  |
| 194881 | aagctgtgct  | aacacttgct  | aaatataggt  | ctcgtgggat  | caccatcttt  | agattgattt  |
| 194941 | actcacctga  | aagaaacgaa  | attcaactat  | aaacatcagc  | cacaagtttg  | tattcaagac  |
| 195001 | ttctttcttc  | aacaatttta  | ttgctttacc  | tataagaggt  | atctccataa  | agccgggagg  |
| 195061 | tctcttgaga  | tgaggagtac  | acgacaacct  | gagtagtcaa  | atgacgggca  | atacatatcg  |
| 195121 | tttggaacga  | tgatctctct  | tactgtttga  | acgcttccat  | agtcacttgt  | caatggctgt  |
| 195181 | tggtgcaagg  | tctcttcttt  | tgcagtatca  | aacacaaaata | gtcccataacc | agaagtagcc  |
| 195241 | atgacaaaaa  | ttgaatttcc  | ccagacttgg  | gttattgcag  | agtggtgcgg  | gtgagagttt  |
| 195301 | gagtcaggca  | gactgtatgt  | gttcacgaga  | cgctgtttcc  | ttatggagaa  | ttgctgcacc  |
| 195361 | tgagaagaag  | aagccatttg  | tttcttgaca  | gttgatttct  | gattggtaca  | tcttagaaac  |
| 195421 | actgaatctc  | ctcgagatga  | tacacattga  | gcattaacac  | cgagtttggg  | gatttttagca |
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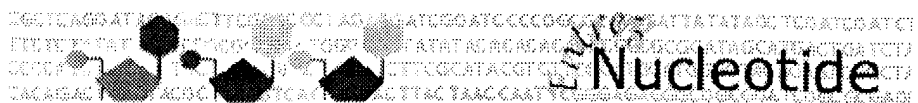
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☐ 1: U53501. Arabidopsis thaliana [gi:1297184] Links

LOCUS ATU53501 37570 bp DNA linear PLN 06-MAY-1996

DEFINITION Arabidopsis thaliana chromosome I cosmid g8261 DNA (cytosine-5-) methyltransferase, zinc finger protein 1, nucleoporin 98, poly A+ RNA export protein, plasma membrane ATPase 2, and serine/threonine protein kinase genes, complete cds.

ACCESSION U53501

VERSION U53501.1 GI:1297184

KEYWORDS .

SOURCE Arabidopsis thaliana (thale cress)

ORGANISM Arabidopsis thaliana

Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids; eurosids II; Brassicales; Brassicaceae; Arabidopsis.

REFERENCE 1 (bases 1 to 37570)

AUTHORS Goodman, H.M., Gallant, P., Keifer-Higgins, S., Rubenfield, M. and Church, G.M.

TITLE A 37.5 Kb sequence from Arabidopsis thaliana chromosome I

JOURNAL Unpublished

REFERENCE 2 (bases 1 to 37570)

AUTHORS Goodman, H.M., Gallant, P., Keifer-Higgins, S., Rubenfield, M. and Church, G.M.

TITLE Direct Submission

JOURNAL Submitted (02-APR-1996) John Morris, Molecular Biology, Massachusetts General Hospital/Harvard Medical School, 50 Blossom St, Boston, MA 02114, USA

FEATURES Location/Qualifiers

source

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CDS

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# ORIGIN

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| 13621 | gatgtgatca | atccaaaact | aaagcgaaca  | gtgatggaac  | tgcataaccc  | tctgcagaga  |
| 13681 | gctataccat | gcagaatcca | ttgccatcct  | tataatgttg  | gaacgcttgc  | aggatccaca  |
| 13741 | gctggaggac | aagtctatgt | ttggacaaca  | aagtagcata  | cttgacctat  | ttgaattagc  |
| 13801 | atgagatgtt | gtgttggttt | gttatgttgt  | acaaagaaat  | ggaagcaagt  | ttaaaaaaaa  |
| 13861 | aaaaactgta | gctcttatag | cttgcaaatc  | cttgtaatct  | atattaatta  | taaagggtgat |
| 13921 | tcaacaaaca | aaagtaaaat | gagagaactg  | catcaactag  | tgtatcagtt  | ccaaaagaat  |
| 13981 | aataaccac  | agaagggtac | attcttcgtc  | atctaccacc  | taagtttccc  | ttctaatacat |
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| 14401 | gataaacatt | aagacatgac | tgaaacatca  | tcagaaactc  | atatcagttt  | gataatgaac  |
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| 14581 | cattgaacat | aacaactaag | ataacgggag  | tgaatggcaa  | tacctacaga  | tggaagcag   |
| 14641 | acgatgatga | attgcaccac | atgccaatca  | aacctaacac  | aaagcaaaat  | ccatatgaga  |
| 14701 | acatactaca | aacacaaagc | agcacaagaa  | ctcaacttac  | tatataagag  | atagtttcag  |
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| 14821 | aagctcacat | tccacaattc | tacaatcctg  | aggttttgta  | gcctaaaatt  | aacttcaaaa  |
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| 19861 | gatccatcct  | acatcacacc  | gggatcatgt | tctagttgaa  | tagttgggtc  | tgcaataaag  |
| 19921 | gaaatgaaga  | gacttacctg  | acaaaaacaa | tgaatgagca  | actgacgtca  | taaaaatgga  |
| 19981 | atgagctctt  | tgccagtttg  | cgcattcaat | aaactgggtca | agagccttta  | cgaatctcc   |
| 20041 | atggttaattg | taataaactg  | cctgcaacac | aatgagtaaa  | tcagcaatga  | gccacaagaa  |
| 20101 | ccttttagcag | aagtagaaaa  | gaagagtggg | atggtgtcct  | taccagagct  | tcgtgcatcc  |
| 20161 | attcagaagg  | gatacccaag  | tccttgataa | attgccgttg  | tgattccata  | gaactccaag  |
| 20221 | tttcacagta  | ttgaaacagg  | atttcccga  | tgacagtgc   | gtgtagatat  | ggatgatctt  |
| 20281 | cacggaagg   | tatgtgaaga  | acaacgtaga | tagcccaatg  | acaaaggccc  | tgagagagaa  |
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| 20701 | ctaggaatct  | cttccagtca  | attgtaaaat | cttgtaacgc  | atcatggata  | ttaccagcaa  |
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37561 aaaggtaggg

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